Study Summary

Understanding How the Arts Contribute to Excellent Education

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By OMG, Inc.
with Charles Fowler and
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FOREWORD TO

UNDERSTANDING HOW THE ARTS CONTRIBUTE TO EXCELLENT EDUCATION

This thoughtful study is a part of the National Endowment for the Arts' commitment to making the arts a fundamental part of education. The ideas and case materials discussed in this study can contribute to the national dialogue on educational reform and the search for excellence in all areas of education.

Those already convinced that the arts make a unique and fundamental contribution to excellence will find support here, as well as some challenging new perspectives.

Those skeptical of the arts' contribution will be challenged by this study to consider what excellence truly means in education, and whether any definition of excellence in the late 20th century can exclude the arts and yet be credible.

The purpose of education in this nation has always been pulled between a vocational and utilitarian pole on the one hand and a broader, civilizing, more holistic view on the other. The current move to rethink, even reinvent education is unprecedented. The opportunity for the arts to be included in this effort is real -- but the case needs to be made and the understanding of what the arts contribute needs a clear, well founded explanation.

This study makes a strong contribution to that needed clarity. Even as it indicates that much more needs to be done, it suggests actions and approaches which can be utilized now so that the singular contributions of the arts to our children can be supported.

We are rapidly entering a world no one has imagined. To enter without the power, the thinking, the creativity, the discipline and the energy, and the unique forms of apprehending and organizing knowledge that the arts offer would be a serious loss to our capacity as individuals and as a nation of learners.

The schools and programs identified in this study are examples of excellence. They are precursors of where we might go. What we can imagine we can create, and it is heartening to see the examples of excellence imagined and created.

This study is a contribution both to a better understanding of what currently exists in the arts and in education, and a guide to the creation of educational excellence.

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Table of Contents Continued

Exemplar Model Profiles 19

Data Collection and Model Assessment Techniques 23

3.2 The Emergent Themes Evidences in the Case Study Assessment: The Arts Can Contribute to Excellence in Education 24

Theme 1:
The Arts Can Foster the Development of Students Who Are Actively Engaged in Learning 25

Theme 2:
The Arts Contribute to the Development of a Creative, Committed and Exciting School Culture of Teachers, Students and Parents 29

Theme 3:
The Arts Play a Role in Generating a Dynamic, Coordinated and Cohesive Curriculum 33

Theme 4:
The Arts Can Building Bridges to the Larger Community, the Broader Culture and Other Institutions 37

Theme 5:
The Arts Can Humanize the Learning Environment 40

3.3 The Quantitative Evidence of the Arts-Infused Curriculum 43

Review of the Quantitative Data for Each Exemplar School 44

Summary of the Quantitative Findings 50

Table of Contents

1. Introduction 1

1.1 A Changing Educational Paradigm 1

1.2 Understanding Experiences in the Field - Making Sense of the Site Visits 2

1.3 Organization of this Summary Report 3

2. A Review of the Literature 5

2.1 Overview of the Literature on the Connection Between the Arts and Academic Performance 5

Program-Related Evaluations 5

Research Studies 8

General Observations Concerning the Scope of Existing Research 9

Unresolved Issues Evident in the Literature 10

Conclusions from the Unresolved Issues in the Literature 13

2.2 Excellence in Education: Overview of the Literature on Educational Reform 14

The Current Context 14

The Elements of Excellent Education 16

2.3 The Implication of the Literature Review for this and Future Assessments 17

3. Findings from the Case Studies 18

3.1 The Case Study Assessment Process 18

Exemplar Case Study Identification and Selection 18

Table of Contents Continued

4. Preliminary Implications for Future Research 52

4.1 Toward an Interdisciplinary Arts Education Model 52

4.2 Using the Model as a Strategy for Achieving Excellence 54

4.3 Guidelines for Implementing the Model Effectively 54

4.4 Assessment and Research to Advance the Model 55

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Chapter 1:

Introduction

In the fall of 1990, the National Endowment for the Arts (NEA) engaged OMG, Inc., with Charles Fowler, Bernard J. McMullan and John McLaughlin* to conduct a study of the relationship between instruction and experience in the arts and students' performance on standardized tests of educational achievement. Concerned about high school students' lack of cultural knowledge and the increasing erosion of the arts in public education, the NEA funded this study to explore this relationship. It was hypothesized that positive evidence would strengthen the status of the arts in education.

For at least two decades art educators have explored the connections between the arts and academic performance. These efforts have continued through both supportive and difficult eras for arts education. Evolving from a belief that the arts can make positive and valuable contributions to academic performance, these endeavors issue from a desire to provide scientific evidence to support results that teachers, students, parents and researchers have observed in practice. The general goal of this research has been to explore how exposure, production and performance in the arts help explain changes in human behavior and student performance.

1.1 A Changing Educational Paradigm

Any assessment of educational performance must be made within the context of a credible prevailing theory of learning. This theory encompasses the goals of education, and the methods of pedagogy and assessment. For over a decade, previous theories of learning have come under scrutiny, causing educators, parents and policy-makers to experiment with new models to improve and transform the ways in which we educate our children.

This changing context has created a slowly emerging paradigm of education that moves away from stimulus-response behavioral theory toward a cognitive one that emphasizes the development of complex thought processes involving the whole child's experiences. This emerging educational paradigm transforms and expands

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* The project team acknowledges John McLaughlin's significant contributions to this project, particularly the part of this report that reviews the literature on transference.

the meaning of education from mere acquisition of information to the development of the capacity to organize, recast and use that information to solve problems. It is this changing paradigm that influenced the final framing of this assessment.

After a preliminary literature review and visits to two exemplary schools, this assessment of the impact of the arts on instruction was reframed to place it in the context of this national experiment. Rather than focus only on achievement measures, the study team reframed the objectives to permit a fuller exploration of how the arts can play a role in creating excellent education for all children.

1.2 Understanding Experiences in the Field - Making Sense of the Site Visits

As initially designed, this study linked a review of existing research findings with assessment of relevant field cases to allow findings from the literature review to inform the casework in the field and vice versa. A thorough review of the literature revealed promising but inconclusive evidence to prove or disprove a connection between the arts and students' performance on standardized tests. Nonetheless, many of these studies raised essential exploratory issues about the connection. The literature search also revealed concerns about the validity of standardized tests as reliable and worthwhile measures of performance, and misgivings about using the arts to achieve improved performance in other subject areas.

However, analysis of quantitative and qualitative data from two exemplary models** revealed potentially strong connections between arts-focused schools and excellence in education. The team saw strong evidence of schools that had been transformed and renewed by the change from a traditional to an arts-based model. Students and teachers were clearly engaged and excited about doing their work and being in school. Students, teachers and parents felt a part of the school environment and were generally committed to higher standards than most schools. The school curriculum had focus and was well connected to the community. Further, there was evidence that these schools placed higher than usual value on individual development and other human aspects of education. These observations suggested that there were indeed strong -- though not well articulated or researched -- connections between the arts and excellence in education.

** The term *exemplary* in this study is used to indicate schools that are good examples of how an arts-infused instructional strategy might be envisioned and, perhaps, implemented. It is not an assertion that the schools necessarily have exemplary benefits on student performance.

The remaining tasks of the study were essentially to make sense of these preliminary field observations. It was the careful consideration of our findings from the field that created the impetus to reframe the initial research question to one that had greater policy relevance and was more methodologically appropriate. The reframed central research question became: **In arts-based schools that exhibit excellence in education, in what ways do the arts contribute to the development of that excellence?** Rather than prove or disprove this new hypothesis, the modified objective of this study became to generate a new, more appropriately framed hypothesis; to subject it to further exploration in six additional exemplary cases, and to use these initial research findings to set a framework for future research in this area.

This study does not make claims that each school visited was a model of excellent education. Assessing excellence was not the objective of this work. Rather this study argues that many elements of excellent education were observed in these schools. Some of the schools may be excellent models. Indeed, all of them exhibited aspects of excellent education to different degrees and most of the educators were concerned about achieving educational excellence.

1.3 Organization of this Summary Report

This report is a summary of the full study.*** Following this introduction, Chapter Two presents a partial review of the extensive literature on the connection between experience in the arts and academic performance and educational reform. In order to understand how the arts might contribute to excellent education, this section defines four criteria of excellent education as follows:

1) Excellent schools are exciting places to learn and teach. They encourage all students, teachers and parents to be fully engaged in the process of learning and teaching each other;

2) To generate and sustain excitement about learning and teaching, the content of the curriculum must be cohesive;

3) Excellent education is relevant to the child's current experiences and to the society in which he or she lives;

4) Excellent education infuses a broad range of abilities, skills and knowledge in its students. Excellent education is not confined to the process of learning but also extends most importantly to performance.

*** A full study report is available from the NEA.

Chapter Three reports on the fieldwork. It briefly reviews the study methodology and profiles of the eight exemplary models and then turns to the fieldwork findings. They are presented through a set of themes linked to educational excellence. These themes are:

- The arts can contribute to creating students who are **actively engaged** in learning;
- The arts can foster the development of a creative, committed and exciting **school culture** that engages teachers, students and parents;
- The arts can help generate a dynamic, coordinated and **cohesive curriculum**;
- The arts can **create bridges** that connect schools to the larger community, broader context and to other cultural institutions; and
- The arts can **humanize** the learning environment.

A summary review of the quantitative findings for six of the exemplar models completes the chapter.

Chapter Four presents the implications of this study. These include: an emerging, interdisciplinary arts education model, use of the model as part of a strategy for achieving excellence, guidelines for implementing the model effectively, and priorities for further assessment and research to advance the model.

Chapter 2:

A Review of the Literature

This chapter summarizes the results of an extensive review of the existing research literature on the connection between arts experience and academic performance. The first section reviews assessments of program-related evaluations and research studies. A summary of the general observations about the scope of existing research in this field and a discussion of two unresolved questions evident in the existing literature follows. This chapter also provides an overview of recent trends in educational reform and how they relate to the arts, giving particular attention to the growing literature on elements and objectives of excellent education. This discussion provides a context and framework to position future research on the connection of the arts to educational performance within the expanding field of educational renewal.

2.1 Overview of the Literature on the Connection Between the Arts and Academic Performance

A growing body of academic and professional writing on this subject falls into two broad categories: 1) program-related evaluation studies, and 2) more broadly-conceived research studies that explore arts and education relationships.

Program-Related Evaluations

Program-related evaluation studies fall into two categories -- integrated and discrete arts programs. Integrated arts programs infuse the arts throughout the entire curriculum as vehicles for learning. Discrete arts programs emphasize individual arts disciplines such as music, dance or visual arts.

Integrated Arts Programs

Although integrated arts programs that were implemented in the 1970's began to explore the connection between the arts and academic performance, they often resulted in the arts being valued as a vehicle rather than as disciplines in their own right. Highlights of several such programs follows.

AGE Program. Supported by the John D. Rockefeller 3rd Fund for elementary students, Arts in General Education (AGE) programs made the arts the instructional fabric of the schools for all children and often altered the entire learning environment. Although a rigorous evaluation was never conducted, reports in An Arts in Education Source Book: A View from the JDR 3rd Fund (1980), and then in Changing Schools Through the Arts (1990) by Jane Remer, offered anecdotal evidence to support the AGE program's impact. Educators involved reported impressive results. "It has given kids a feeling of belief in themselves -- a way to succeed in schools other than by the written word, and it has been instrumental in working out more effective relationships between teachers and students," reported a principal in the Bronx.[1] Sixty percent of the students in this elementary school received public assistance and 92 percent received free lunches. Yet he states, "We are more than holding our own in reading with 38 percent of the students reading on or above grade level."

Project Impact. The U.S. Office of Education allocated $1 million of Education Professions Development Act funds for Project IMPACT (Interdisciplinary Model Programs in the Arts for Children and Teachers). Operated at five sites, from 1970 through 1972, the project attempted to give the arts parity with other instructional areas; provide programs of high artistic quality in each art area; conduct in-service programs for teachers and administrators; infuse the arts into all aspects of the school curriculum; and involve outstanding artists and performers from the community. Project IMPACT was evaluated for two years, but limitations of the assessment methodology -- including short duration, evaluator role confusion, and lack of quantitative data -- created serious interpretive limitations. Nonetheless, that data continued to add to the story about possible connections between the arts and performance.

Data from one site in Columbus, Ohio indicate that initial results were mixed. For example, vocabulary scores at one school rose from 14 to 79 percent above grade level and computation from 14 to 58 percent above grade level. However, results were not consistent. Evaluations conducted by the Columbus Public Schools showed that performance declined in some schools during the first two years of the project and leveled-out in the third year.[2] However, results from the Embedded Figure Test used to evaluate affective behavior such as motivation and creativity indicated (and teacher questionnaires confirmed) that attendance, pupil attitude toward school, and discipline were markedly improved after the IMPACT program began.[3]

Open City Project. In 1975, while new demands for the basics were being heard across the country, the Open City Project involved 600 children in grades K-2 at six elementary schools in New York City's District No. 4 in carefully planned field trips to major cultural institutions and in a series of intensely focused arts experiences in their schools. The idea was that by exposing minority youngsters to the majority culture at an early age, they could improve their grasp of the shared language representing the larger world and thereby increase their performance in language skills in the early

grades. Post-tests at the end of the 1975-76 school years showed that students enrolled in Open City during the six months of the program gained over a year in the Total Reading Score, and gained at a rate significantly greater than the control group whose reading program did not have the arts and field trip components.[4] Although significant results were found, the assessment was weakened by failing to take into consideration a number of other variables, such as teacher performance and parent involvement, that along with exposure to arts may affect student performance outcomes.

All three of these integrated arts programs were programmatically well-conceived. Certainly, the experience of each contributed to the available body of anecdotal evidence about possible connections between the arts and student performance. However, because of evaluation technique limitations, the results cannot be taken as conclusive.

Discrete Arts Programs

Many integrated arts programs were designed to affect entire academic programs. Discrete arts programs were not. Highlights of these program evaluations follow.

Fourth, fifth and sixth grade students enrolled in a program of improvisational drama showed significant improvements in reading achievement, reported A. Gourgey in 1984. He also found these students' attitudes improved in self-esteem and expression, and had a greater sense of trust and acceptance of others.[5] Another study by Tujillo[6] that used Hispanic dance, and another by Kraft[7] in 1978 that used movement found like results. Hanna[8] confirms these findings in a report on at-risk youth who attended the Alvin Ailey Dance Program in Kansas City. She notes that the Ailey Dance Camp "empowered the campers with the necessary skills to create movement and express themselves in writing [and that this] remarkably seemed to improve their self-motivation, self-awareness, self-esteem, and confidence." In addition, an evaluation of a four-month visual arts program sponsored by the Guggenheim Foundation[9] in the early 1970's reported an average growth in reading scores of 6.2 months from pre- to post-test.

As with integrated arts programs, these studies of discrete programs provide important indications for future study, but rigorous evaluations were not done on any of these programs. Also, as with integrated program evaluations, many of these studies attempted to draw overly simplified, direct cause-and-effect conclusions without allowing for the effects of other variables. Furthermore, in all of these cases, students' arts experiences were not long or intense enough to determine whether effects were temporary or transitory, factors pertinent to assessing changes in attitude or self-esteem.

Research Studies

Included here are two distinct areas of work that demonstrate arts and academic performance connections: 1) studies that attempt to draw direct cause-and-effect conclusions between experience in the arts and improved measures in academic achievement; and 2) studies that draw from the concept of transference derived from a more complex cognitive model of learning.

Research on Cause Linkages

This body of work seeks to establish causal connections between student experience with a discrete arts discipline and increased performance in a specific academic area as measured by standardized tests.

As part of her doctoral studies at the University of Michigan in 1978, Karen L. Wolff, now Director of the University of Minnesota School of Music Education reviewed 50 studies. "While it is true that most of the research related to the nonmusical outcomes of music education produced positive results," she also found those studies "generally unconvincing" because of faults in study methodology.[10] In her dissertation, "The Effects of General Music Education on the Academic Achievement, Perceptual-motor Development, Creative Thinking, and School Attendance of First-grade Children,"[11] she found some encouraging evidence of increased creative problem-solving, but still only minimal and disappointing causal relationships between music instruction and increased mathematical achievement.

Her work led some educators and researchers to abandon such research -- a decision this team thinks is misguided. Wolff simply found that the "theory" had not been properly tested because of a flawed model and/or approaches used in the research. It is one thing to discount the research and quite another to discount completely the inquiries that motivated it. The multiplicity of studies in this area are significant enough to warrant continued exploration.

Research on Transference

A growing body of research on various types of transfer between artistic skills and school performance departs from the behavioral model and begins to explore a more complex and inclusive cognitive theory. Much of this research focuses on teaching methodologies.

Salomon and Perkins[12] define transfer as the ability to use previously-acquired knowledge in new and unique situations. Their model focuses on *how* transfer occurs rather than on *what* is being transferred. To achieve effective transfer of knowledge

that helps students attain higher-order thinking skills, Salomon and Perkins point to the necessity of purposeful teaching for transfer. Also, Lee Poganowski[13] explored the development of critical thinking and problem-solving skills and demonstrated purposeful methods that music educators can use to transfer these skills. Further, Shuell and Edwards[14] examined the problem of transfer as it applies to music instruction leading to good performance. Transfer does not just happen, they say. It has to be approached systematically in the teaching process and must involve students' metacognitive abilities.

Jerrold Ross and Ellyn Berk of the National Arts Education Research Center at NYU concluded in a 1990 study[15] that students who took part in New York City's Arts Partner Project showed a significant increase in their abilities to transform, evaluate, remember and generate ideas. They also report that students decrease their negative feelings about school. Another study by Ross and Berk[16] in 1991 suggests that learning historical material can be enhanced by parallel study of the arts of that particular period. Our observations reveal that factors other than transfer may also be operating. The arts, when viewed as complementary and of equal value with subjects, such as social studies or history, may provide the means to develop thinking skills.

Although promising, much more research in applied settings over longer periods of time still needs to be done before transference and cognitive learning models can adequately be understood or prove to play a role in improving academic performance through the arts.

General Observations Concerning the Scope of Existing Research

Our assessment of the above literature led the team to several general observations about the scope and relevance of the current body of evaluation studies and research. These observations had important implications for the way in which the remaining evaluation proceeded.

1) While significant resources have been devoted to assessment of the effects of previous programs, many evaluation designs were not rigorous enough to stand up to serious social science scrutiny. Most of these program evaluations were not assessments at all, but anecdotal documentation of participants' experience providing exploratory field information. Interestingly, several authors call for the need for more rigorous social scientific research.

2) Previous research approaches often focused on the arts as the single factor affecting student outcomes. They attempted to determine causality without paying careful attention to a range of other interactive variables inevitably at

play in real settings. For example, none of the work considered the possible interactive impact of teacher attention, quality or style.

3) Although the literature contains many good anecdotal reports, the actual body of scientific research studies relating to the connection between the arts and educational achievement is rather limited. Taken together, these studies begin to suggest possible connections, but continue to raise more questions in the field.

4) The relatively recent literature on transference is promising, but it is still in the early stages of development. As presently framed, the focus appears to be placed on pedagogy methods and not on student academic performance. Theory would specifically benefit from testing ideas in applied school settings.

Unresolved Issues Evident in the Literature

Also evident in our review of the literature in this field are several recurrent and controversial themes in which research approaches and philosophical principles become entwined, and about which leaders in the field differ. The first concerns substantiating the value of the arts in education and the second the value of standardized tests as measures of student performance.

Substantiating the Value of the Arts in Education: Intrinsic vs. Extrinsic Value?

Arts educators use many different kinds of rationales to justify the value of the arts in education. Two of the main philosophical streams from which such rationales issue are the aesthetic and the pragmatic. These different perspectives have, in the past, been at odds with each other. In 1983, the Music Educators National Conference devoted an issue of the Music Educators Journal to the subject of utilitarian vs. aesthetic arguments to support music education.[17] An art-for-art's sake, or aesthetic proponent stated:

> Any profession that seeks justification apart from its subject is on shaky ground. Not only do these views fail to communicate the virtues and uniqueness of music, they are also defensive, almost impossible to document, and susceptible to attack by any well-educated member of the community.[18]

Similarly, another educator believes:

> [that transference] attempts to justify the intellectual aspects of dance by promising competencies in other curricular areas. This is an apologist's approach which bypasses dance as a primary source of learning. . . If dance is used as a means towards other learnings, it is not fulfilling its primary function.[19]

If the arts are justified on the basis of their intrinsic value, these values must be identified. Such identifications remain vague.

The aesthetic rationale frequently loses ground in the practical world of public schools and tight budgets. Even Bennett Reimer, a major champion of the aesthetic philosophy[20] acknowledges the difficulties of basing claims on aesthetic philosophy. The question, Reimer says, is how to balance philosophical honesty with practical efficacy.[21] This disconcerting experience of a teacher makes the point clear:

> Only someone who has seen a successful music program fall under the budgetary ax, as I have, can understand fully the feeling of hopelessness one feels as years of hard work are erased with quick strokes of a red pencil on a school district's budget sheet. Even more hopeless is the feeling of sitting across the table from school board members...when those same board members haven't the vaguest ideas of what the term aesthetic education means. I recall one board member saying, "That's all very nice, but we really can't afford to support that kind of thing anymore."[22]

In spite of statements like this that argue the need for a more practical rationale, many arts educators remain unconvinced. Ultimately, the question becomes: Can the arts be valued for their intrinsic as well as for their extrinsic value? The credibility of the arts in public education rests upon both. To demonstrate their intrinsic value, the arts must first be in the school curriculum. A focus on their extrinsic value may be a way to get them there and keep them there.

The Debate on the Value of Standardized Tests as Measurements of Student Performance

Renewed understanding of the goals and methodologies of education requires the development of appropriate measures of learning. One stream of this debate, led by John Goodlad, has focused on shifting towards more appropriate educational goals. A

second stream has been led by Howard Gardner whose ideas on assessment are derived from his theory of multiple intelligences and his belief in the centrality of the individual child. These concerns and the ideas from which they derive, have profoundly influenced the field of education and the final framing of our study.

In A Place Called School: Prospects for the Future, Goodlad summarizes his views on assessment and the goals of education:

> The very fact that schools have been given much more to do than teach reading, writing, and arithmetic would make it reasonable to assume that parents in particular have more than passing interest in matters in addition to academics. But, unfortunately, the standard measures we use to determine the quality of schools get at academics almost exclusively -- and a relatively narrow array of them at that.[23]

As part of this study, Goodlad compiled a list of desired educational goals from the 50 states. These goals include basic skills, intellectual development, career and vocational education, interpersonal understanding, citizenship participation, enculturation, moral and ethic character, emotional and physical well-being, creativity and aesthetic expression, and self-realization. According to Goodlad, these goals should be developed in academic, vocational, social, civic and cultural, and personal categories.

John Goodlad, Mortimer Adler[24] and Diane Ravitch[25] have also expressed the need for children to learn problem-solving skills. However, most standardized testing examines only the academic goals and, at that, usually addresses only reading and mathematic skills. Furthermore, they usually test the lower level cognitive skills, such as memory, translation and interpretation, to the exclusion of the higher level skills such as application, analysis, synthesis and evaluation.

Gardner values assessment as necessary for societal commitment to excellent education, but he believes it should be more fully integrated into the child's learning experience. He calls this "assessment in context,"[26] and it grows from a development framework. Gardner is a strong advocate of larger projects, or portfolio efforts, for students because they are a natural vehicle for providing assessment in context. They allow teacher and student to establish individual goals, and to reflect on both the progress and the process of the work. Assessment is ongoing, constant, and constructive, and allows a child to use his or her set of intelligences to the best advantage in learning.

Testing, in theory, is a useful tool that allows students, parents, teachers, administrators, boards and the citizenry to come to a common understanding of their schools. But, currently conceived, standardized tests tell us little about other aspects of schooling -- values, civic responsibility, or the development of other intelligence and the

higher order thinking skills. Undue attention to standardized tests can send the wrong message and may unintentionally pervert the pursuit of a fuller thinking-oriented educational process. Thus, they must be used as one of many tools for understanding. If we intend to adequately measure the impact of the arts on education, it will be essential to develop other appropriate measurements.

Conclusions from the Unresolved Issues in the Literature

In summary, four conclusions can be drawn from the unresolved issues articulated in the literature.

1) If the credibility of the arts in public education rests upon both intrinsic and extrinsic value, the arts must be in the curriculum and be given adequate time and resources before they can affect any outcomes. To attain basic course status, the arts must demonstrate how they serve the cause of general education for every child. The more disassociated the arts become from the main educational objectives, the more they fade in import. The opposite may or may not prove to be true, but it does offer promise. **The more associated the arts become with general educational aims, the greater will be their perceived value. If the arts are to be basic, their value *to* general education and *as* general education must be demonstrable.** Data that establishes the positive effect of arts education upon learning in general could help garner stronger support for arts programs.

2) Arguments that question the validity of standardized tests suggest that these tests are biased against students who are out of the mainstream culture and biased against abilities other than verbal and logical-mathematical. In addition, they do not measure the full range of desired educational goals.

3) Taking seriously the insufficiencies of standardized tests and understanding that alternative modes of assessment are still in the experimental stage, researchers need to collect a broader range of qualitative and quantitative data to measure and justify the value of the arts in general education.

4) Perhaps most influential to this study, is that the debate on the value of standardized tests is deeply rooted in the current educational reform movement that is attempting to broadly and profoundly redefine the goals, pedagogy and assessment of education. Also, this reform movement values the different elements that comprise the school and affects how children learn -- principals, teachers, parents, students, curriculum, school districts and the larger community.

These considerations have all influenced the framing of this study. If we accept the premise that the arts make a contribution to general education and that substantiating their value in this manner is important, this study must be reframed within the context of other educational reform issues now under debate. This frees subsequent research from the difficulties created by the cause-and-effect model of value substantiation. It enables this study to consider performance outcomes, but to do so within a set of other complex, interactive variables. By reframing this study within the context of this current educational debate, we can begin to substantiate the value of the arts on the basis of their contribution to excellent education.

2.2 Excellence in Education: Overview of the Literature on Educational Reform

This section presents an overview of the literature on educational reform as a foundation for substantiating the value of the arts on the basis of their contribution to excellent education. The first section reviews the current context and the literature on educational restructuring and the second section articulates the elements of excellent education.

The Current Context

The overall aim of the current educational reform movement is excellent education for all children. Many observers agree that our expectations for excellent education are not currently being met in most public schools.

In 1983, the Council on Economic Development in A Nation at Risk reported that poor academic performance and an increasing inability of students to qualify for, and be productive in, available jobs portended serious problems for the U.S. economy and society. "Our once unchallenged preeminence in commerce, industry, science, and technological innovations is being overtaken by competitors throughout the world."[27] Similar reports buttressed these findings.[28] Initial response to this educational crisis was redefinition and tightening of graduation and performance standards by state legislatures and governors across the nation, but, this was not accompanied by an overall plan or by additional financial support.[29]

Further, as new requirements focused only on "basic academic skills," to the exclusion of vocational skills, increasing concern was raised about deleterious effects on students whose abilities or circumstances placed them at risk. Levin concluded that students who were pushed out of school by increased academic requirements also left without vocational or trade skills that might make them employable.[30]

Soon, educators and policymakers began to consider the process and conditions under which the nation educated its children. In his study of elementary, middle and secondary schools, A Place Called School, Goodlad found that teachers dominated classrooms with a near-monologue style; students were judged on the basis of the "right answer" and not on how to understand and master the material; instruction was conducted with the entire class and not individually or independently; and enthusiasm for content, success or achievements was consistently absent in teacher-student interactions.[31] Sirotnik in an essay in the Harvard Education Review concluded much the same.[32]

Schools as they existed needed to be restudied, reformed, renewed and reconceptualized to meet the needs of both children and the nation's society and economy. Literally scores of major school districts -- rural, suburban and urban -- are now determinedly seeking new ways to restructure their schools. These efforts share a common goal of changing the process by which children are educated and transforming the expectations that we hold for our students. There are many different renewal strategies being pursued. Two major strands are instructional program reorganization and instructional/curricular renewal. Both offer promising new ways to improve children's education.

Reducing class size, assigning teaching staff to cohorts of students, forming smaller "schools-within-schools," establishing school-based control or governance, and providing support services to students in need are all among initiatives that seek program reorganization. They aim to change the look and feel of schools for students, teachers and parents.

A parallel emphasis on instructional renewal marks a significant, and perhaps more radical, restructuring theme. A slowly emerging paradigm of instruction transforms and expands the meaning of education from the acquisition of information and skills to the capacity to organize, recast and use such information to solve problems. This new paradigm is supported by the move away from stimulus-response, behavioral psychology theory toward a cognitive theory that emphasizes the development of thought processes. This approach requires students to draw upon the breadth of their educational experience to apply concepts and techniques from diverse disciplines to address challenges that transcend a single course or subject.

Such a shift in educational goals has many implications. First, the need for multidisciplinary approaches would require close cooperation among teachers. To be effective, however, the rigor of these disciplines must be sustained to make their unique contribution to the multidisciplinary approach. Second, teaching methods must be modified or replaced by strategies that better meet the learning styles of students and the objectives of the teaching effort. Third, a reformation of content and pedagogy necessarily implies a change in methods for assessing student performance. Increasing numbers of schools are experimenting with alternative assessment methods that

emphasize creativity, synthesis and expression over restatement of facts and formulae. Finally, these changes in the goals of education have implications for how the arts are taught and used in and as general education.

The Elements of Excellent Education

What is excellent education? This is an important question to consider before discussion proceeds on how the arts might contribute to excellent education. Mortimer Adler offers reasonable objectives. He says schools should enable children to develop the skills they need to be life-long learners, productive members of our society and active full participants in our democratic institutions.[33] Several basic elements of excellent education are in place in schools that meet these objectives.

First, excellent schools are exciting places to learn and teach. They encourage all students, teachers and parents to be fully engaged in the process of learning and teaching each other. In these schools, students of all abilities develop genuine interest in learning. Teachers are challenged not by how little their students want to learn, but by how much their students demand to learn.[34] Engagement in the learning process extends beyond the classroom to parents. Parents are strong proponents of schools that help their children love to learn. They actively in support their children's learning by providing them the support at home -- a place to study, access to additional resources, genuine concern about school -- as well as direct involvement in school activities.[35]

Second, to generate and sustain excitement about learning and teaching, the content of the curriculum must be cohesive. Students seem to benefit from seeing the relationship among learnings in which they are engaged.[36] A true learning community is marked by consensus on content of what is taught in school. Shared expectations of goals, objectives and strategies for achieving them enable students to place each class, course or activity in a broader context and see the links between them. Similar, shared expectations permit teachers to build cooperatively on the work of all instructors.[37]

The third element of an excellent education is that it is relevant to the child's current experiences and to the society in which he or she lives. Schools that meet the needs of children recognize the circumstances in which students live and seek to build upon them. Further, they use the resources and experiences of the broader society -- its institutions, its economy, its population's diversity, its past and current history, its politics and policies and its multifaceted culture -- and permit students to learn from and about this broader world.[38] [39]

Finally, an excellent education infuses a broad range of abilities, skills and knowledge in its students. This range includes the skills students need to continue to learn, the knowledge and proficiency they need to become productive members of society, an awareness and facility to use responsibly our society's democratic institutions,

and the knowledge and skills necessary to appreciate and to participate in the society's culture.[40] [41] Thus, excellent education is not confined to the process of learning, but also extends most importantly to performance.

2.3 The Implication of the Literature Review for this and Future Assessments

The initial objective of this research effort was to find scientific evidence to prove or disprove the hypothesis that there is a positive connection between experience in the arts and academic performance. After carefully reviewing the literature on program evaluations and broader research studies, the study team found that conclusive connections could not be found from the available evidence. However, the quantitative and qualitative data generated from this significantly broad area of work cannot be dismissed. These studies have value as early explorations that contribute to theory building about the arts and academic achievement connection.

Two important tasks are necessary to begin to draw some conclusions. The first is to reframe the question in a richer and more appropriate manner. The second is to conduct a rigorous set of scientific assessments based on this new question.

This study attempts to accomplish the first task. The objective of this work, therefore, became to generate and define a conceptual framework to think anew about these connections. This new framework is strongly influenced by the educational reform literature which discusses recent research attempts to renew the entire public education system. Within this emerging literature the goals of education and educational change are viewed most comprehensively. Approaches stemming from the educational reform movement are attractive from an applied social science perspective in that they include credible theories of learning and consider the critical effects of the multiple, interactive and dynamic variables which contribute to successful learning in real school settings. Within this richer framework the elements of excellent education have evolved.

Based upon this emerging model and the redefined goals of education, this study proposes to provide evidence to test the new research question. This study begins to substantiate the value of the arts on the basis of their contribution to excellent education. The next chapter, Findings from the Case Studies, begins to provide this evidence.

Chapter 3:

Findings from the Case Studies

The second research track -- the exemplar case study assessment -- is briefly reviewed and is followed by a discussion of key findings from the cases, organized according to a set of compelling themes that emerged from the assessment fieldwork. Following the discussion of these themes, the study team presents quantitative findings based on available data from six of the exemplar cases.

3.1 The Case Study Assessment Process

Exemplar case study identification and selection, brief profiles of each of the exemplar schools, and data collection and model assessment techniques are summarized in the following pages.

Exemplar Case Study Identification and Selection

An exemplary model approach was used to assess the benefits of arts instruction on student performance. The team developed these criteria for case selection:

- **Open student selection.** Defined to be operant in those schools that did not have any pre-admission standards, such as academic performance or arts auditioning or portfolio presentation. In many cases, but not all, these schools selected their students by lottery within desegregation guidelines.

- **Multidisciplinary arts programs.** It was preferable that schools taught many of the arts rather than a single arts discipline.

- **Articulated program goals and objectives.**

- **Availability of quantitative data.** Access to some standardized, quantitative measures of performance as well as other student and teacher data, such as attendance, drop-out and teacher retention rates, over a period of several years; data that would provide comparisons between pre- and post-program, across the home district or state, and over a significant time period.

- **Broad geographic and socio-economic representation.**

- **Representation of a range of elementary, middle and high schools.**

- **Representation of public and private schools.**

- **Programs in operation for several years.** It was also desirable that the cases selected should be programs that had been in operation long enough to reduce any Hawthorne effects in the data.

In scanning the country to locate exemplar schools, the team contacted more than 500 sources, including state arts and education agencies, and recommendations were sought from a network of colleagues involved in arts education. Eight schools were finally selected and visited: 1) a first tier of six that included exemplar model schools with quantitative data, and 2) a second tier of two that included exemplar model schools without quantitative data, but with notable programs.

Exemplar Model Profiles

These eight exemplar models are described briefly in profiles below.*

First Tier Cases:

Aiken Elementary School, Aiken, SC

The Aiken Elementary School is a public school of 1300 children serving grades K - 6, and is located in a rural/outer suburban area. Students at Aiken Elementary are from a mix of income backgrounds, and one-third are minorities.

The arts are an integral part of the principal's insistence on excellence and the school's philosophy of educating the whole child. Aiken Elementary teachers have been awarded grants to develop specific grade-level curricula for discipline-based arts education. Deregulated curriculum status** has

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* Data cited in these school descriptions are taken from the 1989-90 school year.

** The school's successes have earned it deregulated status from the state, freeing teachers and administrators from specific time guidelines in favor of innovative teaching strategies.

enabled the school to focus resources on arts education, to add more arts classes for all students, and to weave the arts throughout the mandated curriculum.

Ashley River Creative Arts Elementary School, Charleston, SC

The Ashley River Creative Arts Elementary School is a public magnet school for the arts, with 475 students in grades K-5 with no academic or artistic criteria. Students are admitted according to their position on a waiting list. The school maintains a 40% minority population. It is located in a rural/suburban area near Charleston, SC. Students differ greatly in their socio-economic makeup.

Ashley River was opened in 1984 as a vehicle to achieve integration and excellence in elementary education. Inspired by the success of the Elm School in Milwaukee, Ashley River focused on the creative arts from its inception. With a deregulated curriculum status, it targets its resources to provide an average of one hour per day of arts class time for all students, including visual and plastic arts, dance, drama, and music. In addition to discrete arts activities, teachers are encouraged to involve the arts in the teaching of mandated subjects. Many classroom teachers collaborate with arts teachers to develop units or coordinate subject matter and approaches.

Elm Creative Arts School, Milwaukee, WI

The Elm Creative Arts School is a public elementary arts magnet school with 413 students in grades K-5. Enrollment is open selection by lottery according to desegregation guidelines, with no artistic criteria for entrance. The school has been a school-based managed school since 1989. The Elm School is located in an inner-city neighborhood in Milwaukee. Its student population reflects the demographics of the city and is comprised of 52% African American, 1% Asian, 1% Hispanic, 45% White and >1% other.

Founded in 1977 in an effort to improve the existing traditional program, the school's current program is the original arts-infused model. Because of its recognized success, in September, 1991 it enrolled a dramatically increased number of students and teachers in a new building next door to the Roosevelt Middle School of the Arts.

The arts are taught in three ways at the Elm School: 1) as a part of every classroom and every subject where appropriate; 2) as discrete classes in the arts; and 3) by combining several art forms through approaches that

accommodate different learning styles and explore the relationships between the arts. Much of the daily curriculum at Elm is built around a theme which is the focus of exhibits in its impressive Art Gallery.

Fine Arts Core Education (F.A.C.E.), Montreal, Quebec

The F.A.C.E. Program is a magnet school administered by the Protestant School Board of Greater Montreal (P.S.B.G.M.) one of two public city-wide school boards. There are 1000 students at F.A.C.E. in grades K-11 (Canadian/Quebec system). With few exceptions, students are accepted on a first-come first-served basis, with no other formal criteria for admission. Parents are required to make commitments to students' educational goals and to make a small financial contribution to the arts budget (waived in cases of need). Students are from mixed backgrounds throughout Montreal. For each grade level the school maintains one class of Anglophone instruction (into which entry is legally regulated) and two or three classes of Francophone instruction.

F.A.C.E. was founded in the mid-1970's, in part as an attempt to stem the declining enrollments in English-speaking schools of the P.S.B.G.M. The principal and founder proposed to establish F.A.C.E. as an "alternative school" which emphasizes music, art, and drama to provide every child every possibility to learn creatively. At F.A.C.E., artistic skills are explored and pursued "in harmony" with traditional academic subjects. Students are encouraged to make the connections between the lessons and opportunities that the arts and academics have for each other.

Karl H. Kellogg Elementary School, Chula Vista, CA

The Kellogg Elementary School is a public elementary visual and performing arts magnet for the Chula Vista School District, a suburban neighborhood on the outskirts of San Diego. There are 416 students in this school in grades K-6. Students are admitted from throughout the district by open selection without any artistic criteria. Kellogg participates in district-wide busing to maintain desegregation requirements. The student population is approximately 2% American Indian or Alaskan, 2.3% Asian or Pacific Islander, 1.4% Filipino, 40.9 Hispanic, 3.5 African American and 51.6% White.

The principal was transferred to the Kellogg Elementary School in 1987 with the specified goal to use the arts to increase poor test scores. Visual and performing arts are integrated throughout the curriculum, with

drama, dance, vocal music, instrumental music, and visual arts taught as discrete subjects. The school reserves mornings for academics, and afternoons for the arts. The school program is notable for its strong performing arts program and emphasis on instrumental education. Kellogg has experimented with thematic curriculum and is moving more in this direction.

Roosevelt Middle School of the Arts, Milwaukee, WI

The Roosevelt Middle School of the Arts is a public middle school arts magnet. There are 634 students serving grades 6-8. Enrollment is open selection by lottery according to desegregation guidelines, with no artistic criteria for entrance. It has been a school-based managed school since 1989. The Roosevelt Middle School is located on the edges of an inner-city neighborhood. The student population reflects the larger population of the city and is comprised of 1% Native American, 54% African American, 1% Asian, 43% White and 1% other.

The Roosevelt Middle School of the Arts became an arts magnet school in 1984 in an attempt to improve the school and in response to the successes of the Elm School. The philosophy of the Roosevelt School is the education of the whole child through a curriculum based on the arts. The arts are taught as integral parts of classroom instruction in most subjects, as specific disciplines, as collaborative inter-arts projects based on themes, and through the involvement with community artists.

Second Tier Cases:

John Eliot Elementary School, Needham, MA

The John Eliot Elementary School 280 students in grades K - 5. and is located in a primarily middle- and upper-income suburb of Boston. Fifteen percent of its students are minorities.

In the early 1980's parents in Needham formed Creative Arts Councils to support the arts in the schools, and Eliot's council has both raised money and advocated for consistent arts funding from the District. In recent years, teachers at Eliot have taken lead roles in the District's efforts to create an "integrated curriculum" that emphasizes goals such as developing independence in learning, respecting individual uniqueness, and learning to listen and think. Teachers are encouraged to use the arts to achieve the goals

of the new curriculum, and arts and resource specialists are available to work with teachers to plan such units. The arts are also woven into special social and educational programs, such as a visiting poet-in-residence.

St. Augustine School for the Arts, Bronx, NY

St. Augustine School for the Arts is a private Catholic School in the South Bronx. There are 410 students in grades K-8. Students are admitted on a first-come first-served basis and there are no academic or artistic requirements for admission. Parents must be able to pay $1,500 annual tuition fee and are required to be supportive in reinforcing the schools mission.

St. Augustine is an all African American school; 70% of its students come from single parent female-headed households. Fifty-eight percent of the households in the South Bronx have incomes of less than $15,000 per year. The neighborhood surrounding St. Augustine is fraught with decayed buildings, yet the school is freshly painted and clean.

Vocal music, gospel chorus, humanities, movement and dance, instrumental music, studio arts, creative writing, and a limited program in drama, comprise the arts curriculum. The school uses writing to integrate the curriculum so that students not only sing, dance, play instruments and make paintings, but they also write about them. On average, a student spends a quarter of the day on the arts.

Data Collection and Model Assessment Techniques

Prior to each site visit, quantitative data was collected and assessed. Qualitative and additional quantitative data were collected at each one-day site visit. For each site, three types of data were collected:

- **Quantitative data.**
  This included, S.A.T.'s, standardized achievement tests, self-esteem, reading and literacy scores, drop-out and attendance rates, teacher retention rates.

- **Direct observation.**
  The researcher directly observed school activities -- including classroom visitation, production and performance activities, and other relevant arts-related programs -- and the school facility itself, seeking evidence of the way in which the arts visibly affected the physical learning environment.

- **Qualitative interviews.**
  The researcher conducted qualitative interviews with a cross-section of administrators, faculty, students and parents, to gather anecdotal data on the arts-education connection and to provide a balanced overview of the school's arts-infused educational approach and its effects.

A template of inquiry was used to focus the visit. It articulated questions about program, curriculum and assessment methods, facilities, teacher characteristics and techniques, student characteristics, school atmosphere, and student performance. In some cases, additional follow-up data was collected by phone or mail.

3.2 The Emergent Themes Evidenced in the Case Study Assessments: The Arts Can Contribute to Excellence in Education

Findings from the eight exemplar visits suggest a set of compelling, cohesive themes that frame a range of potentially strong connections between the arts and excellent education. The team found strong evidence of schools transformed and renewed by the change from traditional to an arts-based model. Students and teachers were clearly engaged and excited about doing their work and being in school. Students, teachers and parents felt themselves to be a part of the school environment and were generally committed to higher standards than most schools. The school and curriculum had focus and were well connected to the community. Further, there was evidence that these schools had placed a higher-than-usual value on individual development and other human aspects of education. These observations suggested that there were indeed strong -- though not well articulated or researched -- connections between the arts and excellence in education.

It was the careful consideration of these observations that prompted the team to reframe the initial central research question that asked: how does experience in the arts influence performance on standardized tests? The central research question was reframed as follows: **In schools that exhibit excellence in education, in what ways do the arts contribute to the development of excellence?** For the case studies, this change led the team to ground the fieldwork in an exploration of key themes that provided the first step toward constructing a richer model of the contributions the arts make toward excellence. Generation of a new set of propositions organized around the key themes became the modified objective of this study. These propositions, refined and subjected to preliminary testing in the exemplar cases, provided an initial framework for future research.

In summary, the key themes that emerged from the fieldwork are the following:

1) The arts can foster the development of students who are **actively engaged** in learning;

2) The arts contribute to development of a creative, committed and exciting school **culture** of teachers, students and parents;

3) The arts can help generate a dynamic, coordinated and **cohesive curriculum**;

4) The arts can **build bridges** to the larger community, the broader culture and to other institutions; and

5) The arts can **humanize** the learning environment.

The sections that follow explore each of the themes further, and present findings from the exemplar cases in relation to propositions that help define or elaborate the theme.

Theme 1:
The Arts Can Foster the Development of Students Who Are Actively Engaged In Learning

Excellent education for all students requires that schools find more effective ways to fully engage a broader range of students and teachers in the educational process. As a whole, data from the site visits to the exemplar models suggested that these arts-infused schools are doing a better-than-average job of engaging students, teachers, and principals. At these schools, learning was fun and challenging. Principals and teachers repeatedly stated that the multiple dimensions of the arts-focus are one of the ways to achieve this goal. As one teacher said, "Through the arts, I could reach almost any student."

Howard Gardner's theory of multiple intelligences suggests possible reasons why the arts play an important role in engagement. He has identified seven relatively independent forms of cognition that all normal humans possess.*** Individuals differ from one another in the specific intelligence profile they exhibit, and cultural context plays an important role in shaping that profile.[1] Gardner says most schools and tests exhibit a gross bias in favor of only the linguistic and logical-mathematical intelligences and leave to languish those students whose potential may lie in other areas.

*** These capacities include linguistic, logical-mathematical, musical, spatial, bodily-kinaesthetic, interpersonal and intrapersonal modes of thought.

The arts afford an excellent opportunity to appeal to the varied ways of knowing the world by challenging students who favor their linguistic or logical faculties to develop their other forms of intelligence and by providing avenues to reach those students whose profiles favor other forms.[2] In addition, the arts facilitate learning that integrates the various ways of knowing: perception, conceptualization, and production.

Findings from the exemplar schools that elaborate on this theme are organized around the following propositions:

- The arts afford varied modes of learning, creating greater opportunities for students and teachers to connect in productive ways;
- An arts-focused curriculum values the performance of multiple capacities, providing many sources for individual self-respect and self-esteem;
- The arts afford opportunities for intimate and varied connections between students and teachers;
- Learning through the arts is inside-out rather than outside-in; and
- Engaged students are more likely to come to school and stay in school.

The arts afford varied modes of learning, creating greater opportunities for students and teachers to connect in productive ways.

An arts-focused curriculum values all the intelligences and therefore increases the likelihood of engaging more students and teachers.

The Kellogg Elementary School in Chula Vista, CA, for example, involves all its students in ongoing "living history" explorations in which a dynamic performing arts program "breathes life into history." Each year the school selects a different civilization to serve as a counterpoint to understanding U.S. culture and history. Artistic activities such as acting, dancing, singing, constructing, performing, writing and researching involve all students.

Two years ago, when the school studied Ancient Egypt, students constructed an Egyptian Palace complete with throne room, antechamber, and a tomb adorned with hieroglyphics (a spatial activity). The school also produced a play (an inter and intrapersonal activity) in which guests were transported, accompanied by music, (a musical activity) across the Nile River on a barge to tour the Egyptian Palace (a linguistic activity). Students performed in authentic costumes and wore jewelry and used period artifacts made under the guidance of a local craftsman (a spatial activity). Also, they prepared an Egyptian feast. The principal, the performing arts resource

specialist and the language arts specialist believe this way of teaching history is much more effective than teaching strictly by the book. More students learn the concepts they say, because "the students think, feel, see and *are* history."

According to the principal, "All students find a way to participate. Also, over the past three years of the program's existence, the number of awards for self-esteem, citizenship and academic achievement have increased." One teacher reported, "The number of gifted children has increased from six to 33 since the arts program came. These are students who, before the arts-focus was established, showed no special talents."

An arts-infused curriculum encourages students to use multiple capacities, and provides opportunities for building self-respect and self-esteem.

Most educators and researchers agree that self-respect and self-esteem are critical to learning. The possession and acquisition of self-respect through the learning process is a reiterative, self-nurturing process. Students with self-esteem are more comfortable in taking risks to engage in the learning of new material; once new knowledge and skills are mastered, self-respect increases, enabling further challenges.

The principal of the Roosevelt Middle School of the Arts told how the development of drumming skills (a kinaesthetic or movement intelligence) helped a young man improve his self-esteem and stay in school to develop other skills:

> Danny's performance in school had been poor, getting worse and his teachers were concerned about his long-term ability to stay in school. Recently he had started to exhibit behavior problems and to miss a lot of days. One of his teachers observed that he had an interest in music and encouraged him to take drum lessons. He did well, and was soon recognized for his ability and contribution in the all-school band. Not only did he stay in school, but his grades started to improve. Today, one year later, he is still in school.[3]

The principal of The Ashley River School in Charleston, SC described one student with a particularly difficult family life. Though the student was frequently absent and had fallen far behind grade level, her teachers were finally able to reach her through painting and sculpture (spatial intelligences) and they point to this expression as the key to her future progress.

The arts afford opportunities for intimate and varied connections between students and teachers.

The arts enable students to experience teachers -- and for teachers to experience students -- as full individuals with many-faceted interests and abilities. When student-pirates rehearsed a scene from *Peter Pan* over and over again with their teacher, Captain Hook, at the Kellogg Elementary School, they experienced his frustration with his mistakes and his exhilaration as he got the lines correct. They also giggled with naughty delight when they called him the "slimiest slime of them all," and practiced as members of the same "team" effort to put on the show.

After students at Aiken Elementary perform, a resident Teachers' Chorus serenades the whole school. Students can identify with their teachers as fellow performers working hard to put on the best show possible and enjoying themselves at their work.

By providing a forum for common experiences, the arts enable students to identify with and experience their teachers as full individuals. Further, this mutual engagement can enable a teacher to appreciate other student strengths and talents not immediately obvious in a traditional setting. A high school English teacher at the F.A.C.E. Program explained:

> The range of artistic activities that my students engage in not only gives them many opportunities for expression, but also, as artwork is displayed I gain more opportunities to understand my students' thought processes. For example, the short, controlled and tidy strokes in which one student painted a scene from her home-life helped me understand some of the struggles the student was experiencing in creative writing and poetry. This student approached these writing endeavors in a similarly controlled fashion. I was able to adapt my teaching methods to her style.

Learning through the arts is inside-out rather than outside-in.

Artistic learning can be described as "inside-out" learning because it conveys individual thoughts, emotions, and concepts to the outside world. Higher-order thinking, perception, and communication skills are developed as the student transforms an internal abstract idea into an externalized, concrete artistic product. Since students guide their own learning through individual production, the arts encourage high motivation and retention. This model of learning is quite different from "outside-in" learning that is teacher motivated.

For example, after fourth graders at the Eliot Elementary School in Needham, MA studied a unit on insects, their teacher challenged them to use household items to create a Halloween costume of the insect of their choice for the school party. Students surprised both their parents and teachers with their attention to details, such as the number of eyes and the proper place legs should attach to the body. This "inside-out" learning opportunity was both a complement to the formal study of insects and proof that students had mastered their material. As their teacher described, "In order for them to create a good costume, which everybody wants to do, they have to really know the subject matter."

Engaged students are more likely to come to -- and stay in -- school.

Researchers have speculated that students who enjoy learning and feel good about themselves from the mastery of new skills and knowledge are more likely to attend school. Indeed, the anecdotal experiences of parents support this claim. At many of the schools, parents offered stories about the day their child wanted to go to school despite a fever because he or she did not want to miss a rehearsal.

Where comparable data is available, the evidence suggests these arts-focused schools have higher attendance than comparable schools throughout their home districts. At the Roosevelt Middle School, for example, attendance rates were at least 3 percent higher than the average rate for the district from 1987 through 1990. Also, data from the Roosevelt Middle School show that suspension rates have been 8% or 9% lower than Milwaukee's district average for middle schools from 1987-1990.

Theme 2:
The Arts Contribute to the Development of a Creative, Committed and Exciting School Culture of Teachers, Students and Parents

In an excellent school, the entire school culture embraces and exhibits quality. Here, excellence is embedded in its set of assumptions, its values and its beliefs and is determined and embodied in its principal, teachers, students, parents, program and building. The arts, at the core of a school's culture, can provide the framework for developing standards of excellence.

In arguing for the vitality of music education, for example, several researchers have drawn on fields as broad as neurology, philosophy and history to suggest that arts education stimulates brain development most fully and exposes students to that which is "finest and noblest" in human achievement.[4] Judith Lynne Hanna has argued that dance study enables the development of the discipline and commitment that has a clear effect on the performance of students in other classes.[5]

Ron Berger, an elementary school teacher in Massachusetts, offers a comprehensive, thoughtful perspective on how the arts contribute to the development of high standards in his paper "Building a School Culture of High Standards."[6] He states:

> . . .the arts are not just important for the carry over effect, but because they can be at the core of a culture of high standards in a school. It is not a carry over of energy, but rather, an entire structure of creating, critiquing and sharing all academic work within an aesthetic model. I've argued that arts can form the basis of school norms and standards for work in a manner which is incredibly powerful. Student work is strong not just because they have more energy for it, and not because there is a clear transfer of intelligences, but rather because academic work is embodied in projects which are viewed artistically at all points in their creation.

Most of the schools chosen as exemplars for this study have consciously crafted a school culture that draws from the norms and values of artistic pursuits. They are not merely places where time and space are allowed for artwork, but where creativity, high standards, self-motivation, and presentation are hallmarks of the school culture.

The paragraphs that follow elaborate on six propositions that define ways in which the arts affect the culture of the schools that were visited:

- The culture of performance and exhibition can create high production standards;
- The culture of production helps develop standards that individual students can control;
- The arts can help create a culture of positive parent participation;
- The arts can contribute to creating a culture of excellent teachers;
- The arts afford a broad ownership of the school building and program by students, teachers and parents; and
- The arts can enliven the school experience.

The culture of performance and exhibition can create high production standards.

Whether exhibiting their creations or performing a well-rehearsed piece of music, the presentation aspect of artistic work in the case-study schools challenges students to create work that they are proud to show others. As a Roosevelt School student said, "Most of us want to look our best in front of others." At Ashley River, Eliot, Elm and Roosevelt, student artwork is displayed on tables and overflows from walls and ceilings in the hallways. Because work is almost always viewed by their parents or their peers, the culture of artistic presentation encourages students to adopt a high production standard.

At arts-focused schools, the culture of performance extends to concerts, plays, and "art nights." The principal and teachers at the F.A.C.E. Program agree that a culture of performance permeates all that their students do. Several high school students noted they had developed a strong sense of themselves as "creators" or "performers" in all of their activities. One college-bound senior at F.A.C.E. stressed that this self-concept is the most significant lesson he learned from the arts-focused curriculum.

The culture of production helps develop standards that individual students can control.

All teachers play an important role in setting classroom standards. However, as Ron Berger suggests, the production process enables students, rather than teachers, to become the locus of high standards in the school.[7] Through the artistic process, a student refines an idea until the work conveys the student's meaning. Because there is no "right answer" that the teacher can reward, the student must determine what is "right" and "good" for himself or herself. Throughout the process, the teacher guides students as they build their own concept of what constitutes a satisfying result.

This process is also reinforced by group dynamics. When students work together on performances, they learn to create shared standards, to not let their classmates down and to achieve together through teamwork. The dance teacher at the Ashley River School noted, "My students could do "C" level work to satisfy a teacher's requirements in any other course; if they only strive to do "C" work in a dance production, however, they will be falling short of their peers' expectations of creating high quality on stage."

The arts can help create a culture of positive parent participation.

The presentation aspect of the arts can also contribute to building a unique connection between parents and the school. Concerts, plays and performances after work provide an opportunity for parents to participate in the school's program. "When

my son had so much fun at school," stated one parent at the Ashley River School, "I had to find out why." One parent from the Eliot School stated, "It is easier for parents to show their interest and care about their child's artistic projects than about formal academic subjects, particularly because the arts are more immediately accessible even to parents with little advanced schooling."

The arts can contribute to creating a culture of excellent teachers.

Excellent teachers and teaching are primary elements of quality education. Excellent teachers are distinguished by the energy and commitment they bring to their work and their ability to develop innovative curriculum and teaching techniques. Schools that value excellent teaching attract and hold good teachers.

Arts-oriented schools are clearly not the only schools that encourage innovation among teachers, but the study team observed that many of these schools that fostered creativity among their students also expect it from their teachers. For example, at the Ashley River School and Aiken Elementary School, the arts focus has been a catalyst for curricular reforms that allow teacher independence in choosing the appropriate means to meet the curriculum's goals and standards. As a result, rather than rely on formula textbooks, these teachers continue to develop new teaching strategies that help their changing students learn.

At the F.A.C.E. Program a biology teacher told how his students once presented reports on molecular structure by creating and performing dances and plays. This presentation challenged the teacher to think anew about his own teaching and assessment methods.

As one teacher from the Ashley River School stated, "It takes more energy to create a method than to follow preset lesson plans, but when that creation is a team endeavor that empowers the teachers and works for the students, it is well worthwhile." A veteran primary school teacher from the Kellogg Elementary School, said, "I have been teaching traditional elementary school for 20 years. Teaching with the arts as a basis for thematic teaching is demanding, but I have enjoyed these last three years most out of my entire career." Teachers' satisfaction with such a culture is also revealed in indicators such as long waiting lists for teachers to teach in these schools, relatively low teacher absence rates, and comparatively high teacher retention rates.

The arts afford a broad ownership of the school building and program by students, teachers and parents.

Another aspect of an arts-oriented culture is the relationship between students and

their school building. At the Eliot, Elm, Ashley River, and Roosevelt schools artwork is displayed throughout the school. Students find it easy to direct the attention of a teacher, a parent, or a visitor to their own patch of the wall, or to pick up their sculptures to animate the display. One of the results of this ownership is that none of these hallways is marked by graffiti, nor are student hallway exhibits vandalized.

Students and teachers at these schools also transform existing spaces to meet the needs of changing productions. At the Kellogg School, hallways and backstage workshops became Egyptian tombs. At the Roosevelt Middle School, teachers and students turned a classroom doorway into a classic Greek Temple entrance.

The arts can enliven the school experience.

Walking the hallways of these arts-oriented schools, members of the team were constantly aware of production activity -- strains of orchestral music, the rumble of a dance class, murals and works-in-progress on the walls. At the Roosevelt School, three teenage girls were practicing a play they wrote and in which they were starring. Entering the Aiken Elementary School, the team was greeted by a school-made video program "Good Morning Aiken El" that features each of the school's 1300 students at some point throughout the year.

Theme 3:
The Arts Play a Role in Generating a Dynamic, Coordinated and Cohesive Curriculum

Excellent education is marked by a high quality, coordinated curriculum that provides focus to teaching across multiple disciplines, while at the same time values the content, skill and knowledge base of individual disciplines. The study team observed two primary ways in which the arts provided curriculum cohesion. The first, discussed earlier, was a shared culture based upon an aesthetic model and its values. The second was a growing use of interdisciplinary, thematic coursework that teaches the arts on par with other disciplines.

Interest in interdisciplinary curriculum has intensified throughout the country as educators seek to increase relevancy and improve students' problem-solving skills.[8] Traditional schools teach discretely defined classes such as "math" and "English." Yet, outside of school, problems are not as neatly compartmentalized. Students may drop out, educators say, partly as a result of not seeing how education benefits them in their world. Schools should teach specific disciplines, but they also need to create learning experience that demonstrates the relationship of the disciplines, thus heightening their relevancy.[9]

Relevancy for the arts is important for other reasons. Bloom expresses alarm at the ignorance of the American public and the lack of cultural literacy.[10] Charles Fowler argues for the importance of teaching children the arts in order to insure the passing on of our basic cultural heritage and values.[11]

Interdisciplinary, thematic teaching may provide the means to make classics relevant to today's students. Ravitch and Finn recommend interdisciplinary teaching of the classics with history and the arts in an inclusive approach. In this way, the arts and the classics would be taught for their own value, and also through relevant historical themes enabling students to make appropriate connections and comparisons.[12] A number of educators argue that thematic, integrative, or interdisciplinary teaching strategies have as their primary objective the development of these higher order thinking skills.

Jacobs suggests that the means to teach these new strategies is to carefully conceive and design curriculum, and to offer students a range of curriculum experiences that reflect both a discipline-field and an interdisciplinary orientation.[13] Ackerman and Perkins conceptualize curriculum on two levels: the curriculum and the metacurriculum.[14] The curriculum for all grades is comprised of substantive content and concepts -- of knowledge about the world deemed vital for students to acquire, or discipline-field knowledge. The metacurriculum is the thematic-based interdisciplinary set of learning skills and strategies selected on the basis of the value in helping students (1) acquire the curriculum content and (2) develop the capacity to think and learn independently, including symbolizing, familiarizing and innovating, and practicing and structuring.[15]

According to Perkins, qualities of a worthy integrative theme are "broad and pervasive application. . .reveals similarities and contrasts. . .and fascinates."[16] While we do not yet fully understand how the arts support and direct thematic curricula, those associated with the development and use of the arts in this way believe that the arts can play an important role. The *complementarity* of the arts with other subjects, such as social studies and history, may provide further understanding.

The study team witnessed the emergence of this new approach to arts education at a number of the exemplar model schools which taught the arts in three primary ways: 1) as discrete disciplines that were as important as other subjects; 2) as integrative tools that helped teach other subjects; and 3) as the basis for thematic curriculum, either as a focus or taught as a complement to other subjects.

The paragraphs that follow illustrate three propositions that begin to define how the arts may begin to affect the development of a cohesive curriculum:

- The arts can be used to teach thematic curriculum;

- The arts can create a "center" for the school that can be the locus for expressing and exploring the themes; and

- The arts can bring teachers together to develop and teach thematic topics.

The arts can be used to teach thematic curriculum.

Two strong examples of this new arts education model are described below in the illustration of the Ashley River School and the Elm Creative Arts School. In these schools the arts play a primary role in interdisciplinary, thematic curricula, are taught integratively with other courses, and still maintain their integrity as disciplines. This is the essence of a new model for arts education, not the either/or of discrete and integrated models, but a truly interdisciplinary approach in which the arts are given equal treatment in the equation. In these models the arts are rarely used as mere vehicles for teaching nonartistic content. Students are learning as much about the arts as they are about history, English or math.

Ashley River was founded as a "creative arts elementary school." School personnel believes "the arts-oriented approach to the basic curriculum will integrate all aspects of the learning process in the development of the whole child." The school teaches the arts as pure art experiences, as forms related to other arts, and as infused aspects of the general curriculum. In addition to the general curriculum, every student at Ashley River receives a weekly minimum of 80 minutes each of visual art, music, physical education (including dance), drama/creative writing, and Spanish. Interested students can also participate in ballet and Suzuki violin. In addition to these class times, teachers are encouraged to "[use] art processes as naturally as books, chalkboards, and lectures" in teaching classroom units. Science, writing, reading, social studies, math, and the arts are woven together in interdisciplinary units, such as "Weather, Wonderful Weather!" that have specific learning objectives. As the unit is taught students progress toward mandated curricular goals in each of these subject areas, including the arts.

The arts also help to bring the other disciplines together in a cohesive whole. As Ashley River's principal testified before the U.S. House of Representatives, "Problem-solving, synthesizing, analyzing, evaluating -- all become everyday thinking skills when the arts are added to the curriculum, making children active participants. The role of the arts moves to a multifaceted one of academics and of catalyst to other learning, providing diversity of curriculum so needed for the diverse clientele we serve in today's schools."[17]

The other example of this new model is the Elm Creative Arts School. It follows the general curriculum guidelines of all Milwaukee public elementary schools. Pupils study reading, mathematics, language arts, social studies, and science, as well as visual

arts, music, movement and creative writing. "It is not what the children learn but how they learn that makes Elm different from other elementary schools," claims the principal.[18] He believes that using the arts in all subject areas encourages students to use their senses in learning, and helps them to see the arts as a part of everyday life, not as separate isolated activities. For example, in studying the American Revolution, pupils may first learn to sing the songs of the period, and to understand their meaning. Then they look for paintings, prints, and sketches from the 1700's. They may dramatize a particular battle, recreate one of the debates in the Continental Congress, and write their own Bill of Rights. In their research, the students are likely to uncover all the facts they should know, but they will also have become involved in history through their own direct experience which helps them understand and remember the Revolution.

At Elm, the arts are also separate subject areas. Each child spends two half-days a week with arts, music, movement and drama specialists. The visual arts introduce children to a variety of materials and stress the importance of the mind and hands working together. In music, each child learns to play an instrument, to compose music and to listen to appreciate all types of music. In dance students learn to understand how their bodies move and how to interpret feelings by movement. Drama and creative writing give children an opportunity to express themselves and to develop their imagination and uniqueness of expression.

Much of Elm's daily curriculum is built around a thematic approach. The staff chooses a new theme every eight weeks and uses it in all subject areas. The school Gallery is at the center of the school in design and psyche. In it students and teachers design and create a theme experience, using all art forms. For instance, the Underwater Gallery titled "Bottom of the Deep Blue Sea See Sea" lent itself to the study of fathoms and knots in mathematics, waterways in social studies, and salt water and buoyancy in science. Students in drama played the underwater role of an octopus or piranha; in creative writing, they told what it was like to be a pearl in an oyster; in dance, the movement of a shark or minnow was performed with music; and in visual arts, students drew, painted and constructed endless creatures and scenes.

All classroom teachers at Elm are certified elementary teachers with an arts background; most are involved in the arts outside of school. The arts coordinator helps plan learning themes for the school, acts as a resource person for classroom teachers, and identifies community resources.

The arts can create a "center" for the school
that can be the locus for expressing and exploring themes.

Some schools have an arts coordinator who created the "center," or place to carry out the thematic curriculum. At its least developed, the center was the arts

coordinator's office where students and teachers gathered. At its most developed and most energized, it was the theater or the Gallery and truly operated as the hub of the school.

The Gallery was the center of the Elm School, the Roosevelt School and the Ashley River School. At the Elm School, it was a primary exhibit space. For the Roosevelt School, the Gallery served a similar function, and it also was the central place for theme resources and research activities.

At the Kellogg Elementary School, the center was the performing arts resource specialist's classroom. At the entrance to her room was an elaborate "On-Call Board" that specified what rehearsal activities were happening, where they were happening and who should be there. All students checked in here several times daily.

The arts can bring teachers together to develop and teach thematic coursework.

Often the arts coordinator directed essential thematic experiences, and worked with teachers to integrate the theme into other schoolwork. In these schools principals, teachers, students and parents often suggested possible themes based upon the current group's skills and interests. Themes tended to be systemic, inclusive concepts and historical, cultural, biological or ecological in nature. Examples of these themes were Japan, Medieval Times, 100 Years of Chicago Architecture, the Rainforest, and Adolescence.

In a number of cases, the team observed teachers of different disciplines jointly teaching lessons. At the Roosevelt School, when the students studied the Sistine Chapel, the social studies teacher taught the history of the Renaissance and Michelangelo. Then the arts coordinator taught students useful watercolor techniques Michelangelo might have used by taping watercolor paper to the underside of their desks and painting lying on their backs.

Theme 4:
The Arts Can Build Bridges to the Larger Community, the Broader Culture and Other Institutions

If helping children to become life-long learners is a goal of education, it is important to give children the tools to undertake this process. One way to begin is to diminish the distinction between school and non-school activity, creating a richer set of relationships between learning and the rest of the world. As Ron Berger states, "When the differences between these worlds are reduced for students, learning is viewed to

happen everywhere. . . Also, more meaningful and higher quality learning experiences take place as children integrate their range of values and diverse experiences with school project work."[19]

According to Berger, bridging the differences between worlds results in a greater availability of time for learning, a major shift in student attitude and an increased spectrum of resources. Learning does not stop with the 3 o'clock bell, but continues beyond "schoolwork" and extends to the home, in the evening or on the weekend, on holidays and vacations. Resources for knowledge are naturally broadened from the classroom and teacher to include family, friends, neighbors, local experts and cultural institutions.[20] Also, students experience an attitude change when "schoolwork" extends into outside life and is viewed as the pursuit of life.

Emerging from the exemplary cases, the following paragraphs illustrate three propositions that begin to define how the arts can build bridges to the larger community:

- The arts can utilize community problems as foci for school problems;
- An arts-focused school can connect to the resources of local institutions; and
- The connections to the community create a network of artists who enrich the classroom.

The arts can utilize community problems as foci for school problems.

An example of such a community project was observed at the Roosevelt Middle School in Milwaukee. A group of 7th graders was working collaboratively to produce "The Environmental Handbook." They were developing different pieces for this book: political cartoons, researched scientific stories and neighborhood news to address concerns such as recycling, air and water pollution, and local attitudes about these issues. After the arts coordinator finished a demonstration on illustration techniques, one of the students explained, "I was the editor since I was good at spelling and at putting ideas together. Mary was the poet, Yolanda was the science writer and Jenny was the political writer. Alex was the artist, because he was really good at drawing, and Sondra was putting a bibliography together." Students did research in the Gallery, a room with changing visual displays and abundant research material that featured environmental issues in its current display.

At the Ashley River School, this community-focused learning model was put into action when Hurricane Hugo knocked a television tower into the school. The art teacher worked with other teachers to craft units on architecture and design, and classes focused on the process of rebuilding the school. This creative work helped the school

community work through the hurricane's devastation, and also tied classroom learning to an immediate community experience.

An arts-focused school can connect to the resources of local institutions.

The Elm Creative Arts School has a unique relationship with the Milwaukee Art Museum's Junior Docent Program. After visiting the Art Museum a number of times a year with their art teacher, each child of the fifth grade class chose one piece of art, and studied the work and its artist. The student sketched the piece, wrote about the artist and/or the piece of work, and prepared a short speech describing it. The project culminated in the production of a booklet of the work and a celebratory presentation at the Milwaukee Art Museum for parents and students entitled, "Art Center Night."

Kellogg Elementary School students used the resources of their local theater when they put together their pirate costumes for *Peter Pan*. In addition, says the performing arts resource specialist, "Attendance at local theater performances can illustrate excellence and professionalism to young children, that are standards they work toward. Also, field trips and preparation for outings teach students appropriate audience etiquette."

The connections between these schools and the cultural institutions in their communities have had significant effects on the nature and composition of art programs at the schools. The Ashley River School has enhanced its own standing in Charleston, SC by participating in that city's world-renowned Piccolo Spoleto Arts Festival. St. Augustine's arts programs are supported by a special fund that has been raised with the help of New York arts celebrities, and Roosevelt Middle School children have presented their projects, such as an environmental handbook, to local politicians.

The connections to the community create a network of artists who enrich the classroom.

Community experts provide material and teaching resources, demonstrate their skills, act as critics, and share their lives with students. They serve as important role models to students for future careers and introduce them to alternative lifestyle possibilities. Teachers reported that "outside experts served to keep them fresh and excited as teachers and that they help teach children how to listen and behave properly with guests."[21]

A visit by an artist can also provide a student an opportunity not only to learn about a trade, but to participate in that trade immediately. At Eliot School, during a week-long poet-in-residence program, the students created and published a book of

their own poetry inspired by the poet's themes. This kind of relationship with an adult artist enables students to get a reasonable view of places they may one day hold in the community.

Theme 5:
The Arts Can Humanize the Learning Environment

Evidence from all of the exemplary models revealed that the arts were powerful tools to humanize the learning environment. They created settings for students and teachers to engage their intuitive and emotive selves, to develop empathy and compassion, and to share and appreciate different cultural experiences.

Without exception, the educators who were visited in the course of this study went to great lengths to stress that their arts programs were not conceived as methods of improving students' test scores, nor as vehicles to train young people to become artists. The eight schools visited were clearly dedicated to helping their students learn and grow as whole human beings. At both the primary and the secondary level, these teachers and administrators view education not just as the amalgamation of skills, but rather as the process of growing as a person -- in perceiving, reasoning, knowing, feeling, expressing, and living. Whereas the focus on the "three R's" can often stress skills over personal development, the arts teach both.

The following paragraphs elaborate five propositions that emerged from the exemplary cases:

- The arts can improve the aesthetic environment of the school and make it relevant for students;
- The intuitive, and emotive aspects of the children are engaged in a complement to the sciences;
- History and the study of other places is made more human and more real -- artists' perceptions add insight about life now and in the past;
- Through the arts students can develop empathy and compassion, the bases of relating to and cooperating with others; and
- Multi-cultural/transcultural aspects of the arts afford appreciation and acceptance of diversity.

The arts improve the aesthetic environment of the school and make it relate to the students.

As discussed earlier, buildings that house many arts-oriented programs are filled with students' artwork, murals, banners, and exhibits -- sometimes to the point that the hallways are difficult to navigate. Indeed, every patch of wall at the Eliot School is covered with posters of classic artwork or great examples of student artwork. The principal can hardly help herself from pointing out individual student accomplishments and triumphs as she guides the visitor past tables of sculptures, dioramas and puppets. For the principal, the arts are a strong medium through which she helps her students learn that "Eliot School is theirs to live in, to learn in, to grow in, and to show in."

The intuitive, imaginative, and emotive aspects of the children are engaged in a complement to the sciences.

An ongoing strain in the educational reform debate has been a call for a return to "the basics." The schools visited in the course of this research would not disagree. However, they would dispute the definition of "basics." For them, the arts are more basic than other subjects because they deal directly with the humanity of each student, through techniques and subject matter.

The principals of St. Augustine and F.A.C.E. describe their arts-oriented programs as having returned to the kind of education that engages and develops the intangible side of the human being through music, painting and sculpture and more concrete skills through science, math and literature. Both of these principals built their arts-focused schools on the importance of developing the full student, and not just those dimensions that are conveniently accessed by "the three R's."

History and the study of other places is made more human and more real. Artists' perceptions add insight about life now and in the past.

Reading a book about a foreign culture or the past may not stir a child's perception or enter the student's memory in the same way that acting out a play or performing music from that age can do. To produce the arts of a different culture or time period, a student needs to have some understanding of the world view, assumptions, and technology of that culture.

At the Aiken Elementary School, each grade level is assigned a thematic country each year. Classroom teachers weave the history, culture, geography, and arts of that land into their lessons. The first graders, whose country was Australia, learned about animal body parts, by talking about kangaroos.

Students at the Ashley River School made the pottery of local native Americans as they studied the history of South Carolina. Mixing clay with cow dung and firing their pieces in a pit, they studied the technology, materials and history of these people. Recreating the designs and colors of the pottery built an immediate bridge to the symbolism of these people and to the aesthetic and cultural backgrounds that have helped to shape their local culture.

Through the arts, students can develop empathy and compassion, the bases of relating to and cooperating with others.

In several ways the arts were observed to teach students vital skills about working with others. In the performing arts, students are engaged in a group enterprise in which the final result is dependent upon each individual. In all endeavors, the arts encourage students to develop a sense of shared undertakings, and to recognize alternative points of view. Because the arts draw on a wide range of skills and qualities in creating work of value, students learn to value differences. As Charles Fowler states:

> By putting us in touch with our own and other people's feelings, the arts teach us one of the great civilizing capacities: how to be empathetic. . . Let us remember that intelligence can be used to deceive and to cheat; it can be used self-servingly as a tool of greed. . . in contrast, empathy intercedes; it reigns in such uses of intelligence. If we have empathy, we can assume another person's point of view. We can put ourselves in their shoes. To the degree that the arts create empathy, they develop a sense of compassion for other human beings.[22]

A teacher recounted a poignant story of a Vietnamese child who entered school as a new student in the middle of the year. Upon her arrival, her new classmates teased her about her language inability and dress. However, in several weeks her meticulously drawn illustrations that compared her old and new homes, won the hearts of those who had mocked her. Through her drawings she revealed her common humanity and gained entry into her new culture.

The multi-cultural/transcultural aspects of the arts afford appreciation and acceptance of diversity.

Compared with other elements of the curriculum and with other elements of school life, the arts can introduce students to different viewpoints, beliefs, experiences and backgrounds with more vividness, less intimidation, and in ways that promote fuller

understanding. In the Eliot School's fourth grade class, for example, each student chose an historical woman for Women's History Month and a prominent African American for Black History Month. Students created costumes, murals, and drawings to represent their chosen figures, and each student gave a presentation as if he or she were that important figure. Some time after these classroom units, individual students still told their figures' stories of achievement. For the class, then, Amelia Earhart was no longer just a distant figure but was now remembered as the person Joanne had recreated.

3.3 The Quantitative Evidence of the Effects of an Arts-Infused Curriculum

Themes and propositions presented in the previous section begin to link arts education to excellent education in a model that is more complex than defined by previous research. This model contains a number of variables suggested by the themes that are interactive and that mutually reinforce each other. This set of interactive variables ultimately affects student outcomes.

Throughout this report, observations and findings about schools with art-focused curricula are presented relative to these themes, or possible variables. The study team has sought to provide a picture of how these schools operate, how they feel and their potential for providing an excellent education. In this section, the study considers some of the more commonly-used measures of academic performance -- primarily, standardized test scores -- to begin to understand how arts-focused schools help students achieve. These data should confirm, but not prove, the findings about the efficacy and quality of these schools, and are presented with several important caveats:

- First, despite sharing a common curriculum-focus, the schools from which data have been drawn are different from each other in the number of students served, the grades involved, selection and admissions criteria, length of operation and differ along a host of other dimensions. Comparisons across them are not possible.

- Second, none of the programs were created as strict demonstration efforts. Consequently, there are no control groups to which outcomes of students in these schools might be compared, nor are there extensive additional explanatory variables -- prior academic performance, months in the program, demographic characteristics -- that might be used in analyses of the factors that predict academic success.

- Third, there is some evidence that the students served in some of these schools are better prepared academically and more motivated than students who attend

other schools in the district, making it difficult to distinguish the benefits of the school from the abilities and experiences that children brought with them.

- Finally, the breadth and scope of quantitative data pales in comparison to the qualitative evidence presented throughout this report.

These caveats are offered to acknowledge a concern about overstating the meaning of available quantitative evidence. Used in conjunction with the qualitative evidence described throughout this report, they help begin to describe the character and results of arts-focused schools.

Review of the Quantitative Data for Each Exemplar School

Data considered below were collected from the first tier of exemplar models, six of the schools described in earlier sections of this paper.

Aiken Elementary School

Aiken Elementary School in Aiken, SC offers some compelling evidence about its service to students. Two in five entering first graders during the three academic years 1987/88 through 1989/90 tested below the threshold for receipt of Chapter 1 support. These Chapter 1 eligibility rates were 4 to 6 points higher than the Aiken District overall and 13 to 16 points higher than South Carolina rates of Chapter 1 eligibility rates overall. Aiken Elementary's students enter first grade academically less prepared than their peers in the rest of the District and in the state. However, standardized test results at the end of grades 1 through 5 for these same academic years suggest that Aiken Elementary students overcome these apparent academic weaknesses quickly. Summarized, the results follow.

- Aiken Elementary students have consistently out-paced their district and state peers in both reading and mathematics achievement tests in each of the years.

- Further, the percent of Aiken students meeting the state standards for grades 1, 2 and 3 in reading and mathematics exceeded 90% in all years with the exception of second grade results in 1988 where 87% of students met the state standard in reading.

- Fourth and Fifth graders in the school outperform students throughout Aiken and South Carolina in each of the four subjects tested on the CTBS.

  - Overall, median national percentile ranks place fourth grade Aiken students

almost 20 percentile points above Aiken and South Carolina students overall in reading, language and mathematics.

- Fifth grade students, on average, have median national percentiles scores 16 to 25 points higher than other students in Aiken in reading, language and mathematics and national percentile scores 12 percentile points higher in science as well.

- The gap between the performance of Aiken Elementary students and other students in the state has grown substantially in the past three years, with Aiken Elementary continuing to out pace the state.

According to information provided by the State of South Carolina, Aiken Elementary is in the top 1% of schools in the state in the performance of its students on standardized tests relative to the academic preparation of its student population. Another way of conceptualizing this is that Aiken offers excellent "value-added" prospects for the students it serves.

The Ashley River Creative Arts Elementary School

The Ashley River School is an arts magnet school in Charleston, South Carolina school district since the 1984/85 school year. Although there is no academic or artistic criteria for admission, there is keen interest among parents in enrolling their children in Ashley River. For example, although the school serves 475 students, its waiting list has been as long as 1200 students, including unborn children. Admission is based on position on the waiting list, but within desegregation guidelines. Nevertheless, the size of the waiting list suggests that the school attracts students whose parents are highly concerned about their children's education and are likely to hold academic expectations for their children and be highly supportive of excellent academic performance.

Summary performance data follows.

- Results of the Cognitive Skills Assessment Battery (CSAB) administered at the start of first grade confirms that students enrolling as first graders in Ashley River enter school prepared to learn.

  - In its first year (1984/85), 80% of first graders met readiness standards. This percentage increased steadily over the next several years leveling off at 92-94 before falling to 84% for the 1990/91 school year.

- In contrast, the comparable percent of students meeting readiness standards throughout the Charleston County School District has remained at or lower than statewide levels of approximately 75%.

- Patterns of achievement among Ashley River students have remained high throughout the history of the school.

  - More than 90% of students in grades 1 through 3 have met basic skills assessment standards in reading and math throughout the period; and in recent years, the percentage of students meeting basic skills standards have regularly exceeded 96%.

  - These rates of achievement have been about 10 percentage points higher than students enrolled in other Charleston County and state schools.

- Similar patterns of academic achievement are seen when reviewing the test results of fourth and fifth graders. However, the results are not uniform across years among Ashley River students, and the gaps between their performance and those of their peers in the district and state fluctuate as well.

  - In general, district and statewide median national percentile ranks place students in Charleston County and South Carolina slightly above the national norm in reading (49 - 56 percentile for Charleston; 46 - 57 for South Carolina); modestly higher than national norms in science and language arts (55 - 63 for Charleston and 51 - 65 for South Carolina); and substantially higher for mathematics (63 - 73 for Charleston and 57 -72 for South Carolina).

  - With the exception of a single cohort's results in a single year (fourth grade 1986/87),[23] Ashley River students have placed at least 6 and often as much as 20 percentile points higher than both county and state levels in each of the subjects tested.[24]

In summary, Ashley River students have demonstrated substantial academic achievements throughout the history of the school. Although the school enrolls a somewhat better academically prepared student population, the school appears to sustain and build effectively on its students' academic potential.

The Elm Creative Arts School

The Elm Elementary school is an elementary arts magnet for children in Milwaukee. In addition, students from nearby suburban districts may apply for

admission. Overall, more than one-third of the students are eligible for the free lunch program. Admission to the school is described as not selective. No academic or arts performance requirements criteria determine student selection. However, parents and students do recognize that the school has an arts-infused curriculum. Limited test information available for the school consists of two trends in Iowa Basic Skills tests for the second and fifth grades.

- Elm Street students test substantially higher than their peers as early as second grade in basic academic skills. Sixty percent or more of Elm Elementary second graders test above national averages in reading, vocabulary and mathematics. This compares favorably with 1990 district-wide results in which only 38% of all Milwaukee second graders tested above national averages in vocabulary, 43% in reading and 48% in mathematics.

- Results from fifth grade testing indicate that while district-wide results decline in basic skills, the results for Elm School fifth graders show an increase in the percent of student testing above the national average.

    - For example, while the gap between Elm School and citywide results in the percent of second graders who tested above the national average in 1990 was 12 percentage points, the gap between fifth graders and their citywide peers was 26 percentage points.

In summary, Elm Elementary provides some initial evidence about how an urban school serves its students using an arts-infused curriculum. Student performance as measured by standardized tests suggests that students master basic skills at a rate consistently higher and faster than do their peers in other schools. In addition, this rate of mastery apparently continues from the primary grades through later elementary years.

The Karl Kellogg Elementary School

The Kellogg Elementary School in Chula Vista, California provides a strong basic skills and arts performance curriculum to its students. The school serves a racially balanced population representing its surrounding community and its district. Approximately 48% of its students are minority; including 41 percent Hispanic. No information is available concerning the academic and economic characteristics of students. Analysis of the data indicate impressive rates of progress.

- Based on results from the California Assessment Program, a statewide proficiency test administered to 3rd and 6th graders to assess school performance, students at Kellogg Elementary do well in school.

- Third grade Kellogg students have remained above state averages in reading, writing and mathematics and have shown increases in these areas during the past three years since the arts program started.

- Six grade results are at or slightly below state levels in reading and writing, but lag somewhat behind in mathematics.

- Students in all grades take the Stanford Achievement Tests (SAT) in reading and mathematics. In addition, the SAT in language is administered to students in grades three through six.

  - In each of the areas tested, Kellogg students have shown substantial gains in average tests scores in grades one through five.

  - By the 1990 school year, both reading and mathematics score averages were above the national norm in all grades. These levels marked substantial gains over the average Kellogg scores in these grades three years earlier when most grades fell below national norms.

  - Language scores were above the national norm in grades three through five; only the grade six level was below the 50th percentile.

Kellogg Elementary School's results suggest that students in Kellogg are not necessarily drawn from the most academically advantaged. However, in virtually all grades the school has shown strong progress toward achieving and ultimately surpassing national norms in basic skills of reading, writing and mathematics. While there remains considerable room for improvement, Kellogg Elementary appears to provide a strong academic foundation for its students along side its exciting performing arts program. Its impressive rate of progress during the past several years suggests that its overall program is having a beneficial impact on its students.

The Roosevelt Middle School for the Arts

The Roosevelt Middle School is a citywide arts-focused program in Milwaukee that offers a middle school extension of the approach pursued at the Elm School. The arts-infused program at Roosevelt began in the 1984-85 school year. Roosevelt serves a population similar to Elm and in fact Elm is a major feeder for Roosevelt. Given the increasingly strong performance of students at Elm, it is possible that the Roosevelt School enrolls students who may be better prepared for middle school work than are students who attend other Milwaukee middle schools. A majority of students in Roosevelt Middle School (about 59%) are minority. This is somewhat lower than the 68% minority student representation across Milwaukee middle schools. It is also the

case that data across several years indicate that minority students at Roosevelt and throughout Milwaukee perform substantially below national norms in reading on the Iowa Test of Basic Skills (ITBS). ITBS test results in mathematics suggest that Milwaukee students overall test at national norms, but that African-American students lag about 12 percentage points behind national norms. Thus, some evidence suggests that students at Roosevelt -- in particular, those who are minority -- are not especially advantaged academically and that the school serves a broad range of students.

Nevertheless, the impact of introducing an arts-focused curriculum on school performance indicators has been dramatic.

- The percentage of students meeting state reading competency standards has risen from less than 30% two years before the program changed to more than 80% upon its start.

- Levels have remained at this level since then. While fewer than 10% of Roosevelt students met the competency standard in mathematics in 1982-83 before the program began, competency achievement levels in math rose and remained 50% since 1984-85. By 1989-90, 60% of Roosevelt students had met the math competency standard.

- The change to an arts-infused specialty program has also coincided with significant changes in other school indicators as well.

  - Average daily attendance has risen from 85% to about 92% and remained relatively constant.

  - The percent of failing students has fallen from 16% to 6% in the period.

  - Student behavior problems appear to have been reduced during the period. The percent of students suspended in the year before the program initiated exceeded 50%. Since the start of the program, this rate has fallen below 15% and was lower than 10% in the 1989-90 school year.

The F.A.C.E. Program

Located in Montreal, F.A.C.E. serves students as early as Kindergarten through high school. While admitting that this alternative program is not for all students, the school carefully notes it is neither an "elitist" institution nor a conservatory for fine arts prodigies. Parents and students considering enrolling in F.A.C.E. must be prepared to achieve in both traditional and fine arts subjects. It is impossible to determine, given the limited information available to this study, the degree to which students in F.A.C.E. differ from other students in Montreal.

Analysis of the data available indicates these trends:

- Standardized test results (Ministry examinations) from F.A.C.E. indicate that students' performance is substantially better than the performance of students throughout the Montreal education system as well as better than students in a set of comparison high schools in the city.

  - Results of 1990 ministry examinations across the full range of high school courses reveal that the percentage of F.A.C.E. students passing the examinations exceeded both the Protestant and larger Catholic school averages in all but seven of 63 different courses.

- Although there have been variations in rates of course passage among F.A.C.E. students from year to year, the overall pattern suggests that student performance remains consistently above average.

- Results of 1988 college aptitude testing also confirms that F.A.C.E. students perform at higher levels than do their peers in other schools. The school suggests that the average F.A.C.E. student achieved a score equivalent to 1100 on the U.S. Scholastic Aptitude Test (SAT) in 1988.

Summary of the Quantitative Findings

The approach above was to present data about schools acknowledging the particular limitations of each. The argument of the efficacy of arts-focused schools rests not with the results of an individual school, but with the weight or bulk of available data considered across schools. Overall, the analysis of available test scores from these schools suggest the following:

1) Students in arts-focused schools usually have higher than average test scores than students enrolled in other schools in their district and their state.

2) Standardized test results of students in arts-focused schools compare favorably with those of students enrolled in more academically selective schools even when arts-focused schools themselves do not pursue selective admissions policies.

3) Some evidence suggests that students with low to average academic preparation perform at a higher level on standardized test scores when enrolled in arts-focused schools and that students with more favorable

academic preparation sustain their strong academic performance. Performance results, however, are not universal; some students achieve only low scores on standardized test and some are retained in grade.

4) Students who enter arts-infused schools with above average academic performance are able to sustain these levels and often improve their performance during their enrollment in arts-focused schools.

While these findings are highly promising for the arts, it is also important to acknowledge that the arts are not the panacea for all educational ills.

Chapter 4

Preliminary Implications for Future Research

The study findings reported above led the study team to four significant sets of implications concerning the connection of the arts with excellent education. The first set of implications is concerned with the general contours of an emerging comprehensive arts education model. The second set of implications is concerned with this model's connection to excellent education. A third set of implications pertains to ways in which such a model might be implemented more broadly. A fourth set of implications concerns the characteristics of further assessment research that would advance understanding of the model and its effects.

4.1 Toward an Interdisciplinary Arts Education Model

One central conclusion of this study is that arts education is in need of a more comprehensive model that synthesizes the several mutually supportive ways in which the arts are effectively taught in schools. Such a model would transcend current dichotomies between discrete and "integrated" methodologies. The research team observed schools where arts education is made central to the entire curriculum and learning, and where the constructs of a new comprehensive arts education model are apparent. This interdisciplinary approach is operationalized through two parallel modalities:

1) **Discrete art coursework** that is ascribed with the same importance and legitimacy within the curriculum as other coursework. The arts, in such settings, like other courses, are taught with well articulated teaching objectives that include mastery of technique, while arts specialists, independently teach theory, conceptualization and history. But these discrete efforts are not isolated or insulated from the larger school program. They connect to coursework in the larger context of unifying themes and activities in the same way that other coursework makes connections.

2) **Integrated techniques** that employ the arts within other coursework, such as social studies or English, to help convey the teaching objectives of that coursework. In this case the arts are treated not just as vehicles or methodologies for teaching the basics. The importance of learning in both areas is emphasized. In this new definition of integration, the arts are not

put in the service of learning in other subjects and therefore slighted, but taught with equivalent emphasis so that learning takes place in both areas. The approach is truly interdisciplinary.

Both of these modalities are taught within the framework of an interdisciplinary curriculum that is intended to develop higher order thinking skills, such as comparison, restructuring and innovation.

Also, this new model operates at three levels in the school:

1) **Within the classroom**, such that curriculum is aimed at the inter-relationships in subject material;

2) **Among teachers**, such that those in different classrooms coordinate what they are doing in their classroom with others who share the same students to help students recognize and experience inter-relationships; and

3) **In the whole school**, through a set of school-wide activities that create thematic coherence and relevancy to student needs and that are progressive and cumulative over time.

An example of this model is evidenced in the Elm School for the Creative Arts. At the time of the site visit, the interdisciplinary theme was "Dinosaurs." This was explored in discrete subjects including science, math, English and the arts. In these subjects substance and technique of the discipline were taught in depth, and also related to the theme. For example, in creative writing children wrote plays about dinosaurs; in science, students were engaged in the origins and ecosystems of the dinosaurs; and in the visual arts, students did dinosaur dioramas, learning about 3-dimensional form, color and design. The arts were also used integratively as students drew pictures to illustrate their plays. In this case creative writing and visual arts reinforced each other and learning took place in both.

At Elm, this model operated at three levels. Within the classroom, inter-relationships were identified, and teachers planned curricula together and collaborated across units and within the same classroom. The full group of Elm teachers had primary responsibility for suggesting a school-wide theme and for working with the arts coordinator to develop the interdisciplinary curriculum linkages. The central Gallery, the major exhibit space, celebrated the theme with an amazing array of dinosaur art depicting their lives and habitats -- including people-sized papier mache models, figurines, dioramas, murals and drawings.

4.2 Using the Model as a Strategy for Achieving Excellence

A second conclusion that can be drawn from this research is that this new arts education model can be a promising strategy for advancing the goals of excellent education. Arts-infused instructional approaches are certainly not a panacea for all educational ills, nor are they the only way to teach important higher order thinking skills. However, the study findings confirm that they can effectively support the goals of excellent education. Based on the literature and on what is believed by practitioners in the field, excellent education must encompass the full range of human experiences. In principle, it should not exclude any subject area, including the arts. The findings from the field investigations reveal that the characteristics of arts education not only add to the range of life experiences, but provide a bridge between affective and cognitive experience. The arts help connect knowledge to more complete understanding. This point is well illustrated in the example of the Ashley River School's lesson on local native American ethnic groups and the history of South Carolina. Students mixed clay with cow dung, applied their own interpreted symbolic designs and fired their pieces in a pit (discrete mode). At the same time, through the combined use of history and the arts (integrated mode), the students studied the technology, materials of the time and connected these with the cultural symbolism. The interdisciplinary broadness increased these students' understanding of these people more than if they had simply read about them in a textbook. Indeed, the high esteem in which the arts are held in these schools is a reflection of how directly and consistently they relate to the educational program in all, or most, of its aspects.

4.3 Guidelines for Implementing the Model Effectively

If one accepts the claims that a new arts education model is emerging and that it indeed can support the goals of educational reform, a third set of study implications are guidelines for those who choose to implement this new model:

1) **Both the arts and other disciplines must have strength and integrity.** Each must have depth in both substance and technique and have a clear role in the curriculum. Objectives must be articulated for each discipline. The interdisciplinary model treats the arts with equivalent importance to other subjects.

2) **For a full arts-infused program, the time allowed for discrete arts should be roughly equivalent to that allowed for the other disciplines. For a minimum arts-infused program, adequate subject time should be allotted for the arts.** Adequate time is the time needed to teach at least four of the arts with integrity.

3) **Within a school program, there should be movement towards a comprehensive arts curriculum** that includes creative writing, visual arts, dance, drama and music.

4) **The model must be whole-school oriented.** It requires district and principal leadership and should be connected to other school improvement activities. School-wide events create purpose and synthesis by utilizing themes and physical spaces. All teachers, arts and other, work together to assume joint curricular development responsibility. Teachers are also interested in engaging in training and the school program connects to the skills, interests and resources of the larger community.

5) **Teachers must be active participants in learning about and developing the model and the role of the arts.** Indeed, there must be support from the national professional association and opportunities for professional development for cross fertilization of ideas across schools.

6) **The program must continue for long enough to develop and yield results.** This means it must have a duration of at least 5-6 years or ideally the equivalent of a cohort to enable research to fully assess the influences of such a program.

4.4 Assessment and Research to Advance the Model

Finally, if one accepts the first three sets of implications, there are further implications for educational assessment and research. The study team recommends an approach to educational assessment concerning the arts and education connection with the following elements:

1) **Ensure that a thorough plan for evaluation is included in the early design and throughout the project.** Assessment should focus on analysis of the process of professional innovation and the full range of participants' progress including teachers and student.

2) **Use the assessment process as a laboratory for the development of more appropriate evaluation objectives and methodologies.** These objectives would include a broader range of educational objectives, such as teaching children to be good problem solvers, and active participants in a democratic society, and helping teachers to jointly prepare relevant curriculum experiences. The five themes and relevant proposition that emerged from this study provide an initial basis for considering assessment requirements.

3) **Use this opportunity to develop appropriate and effective techniques for assessing performance in the arts** and the quality of arts activities in schools. This would include the development of a range of appropriate assessment measures for the arts and for teaching of the arts.

These four sets of implications constitute a preliminary framework for a discussion to engage a broad array of arts educators and researchers. It is hoped that through the dissemination of this framework and organized discussion, more specific ideas will be generated to advance understanding of the contribution of the arts to excellent education.

Notes to Chapter 2:

1. This account was published in Charles Fowler (ed.), An Arts in Education Source Book (New York: The JDR 3rd Fund, 1980), p 118.

2. In retrospect, this decline might reflect a typical pattern known as the J Curve effect. In this situation, children who were previously low achievers and attenders did not take tests, which skewed the test averages higher than actual. Because of the arts, it might be said that there is higher interest in school and that these children now stay in school longer. They therefore take the tests now and lower the overall test score averages.

3. This information was reported in Try a New Face, a report on HEW-Supported Arts Projects in American School (Washington, D.C.: U.S. Government Printing Office, 1979), pp.9-12.

4. Ibid., p. 35.

5. A. Gourgey, "The Impact of an Improvisational Dramatics Program on School Attitude and Achievement." Paper presented at the Annual Meeting of the American Educational Research Association (68th, New Orleans, LA, 1984).

6. L. Trujillio, "Enhancement of Self-concept and Academic Achievement through Ethnic Dance," Boulder CO: Colorado Center for Multicultural Research and Service, 1981.

7. R. Kraft, "Can the Movement Specialist Really Influence Self-Concept?" Physical Education, 1978, 35 (1), pp. 20-21.

8. Judith Lynne Hanna, "Ailey Camp Promotes Literacy for At-Risk Youth," Dance Teacher Now, May, 1990.

9. Guggenheim Museum Children's Program, Learning to Read Through the Arts, (New York: Solomon R. Guggenheim Foundation, 1974).

10. Karen Wolff, "The Nonmusical Outcomes of Musical Education: A Review of the Literature," Bulletin of the Council for Research in Music Education, No. 55 (Summer 1978).

11. Karen Lias Wolff, The Effects of General Music Education on the Academic Achievement, Perceptual-motor Development, Creative Thinking, and School Attendance of First-grade Children (Ann Arbor: University of Michigan, 1979), p. 152

12. G. Salomon and D. Perkins, "Rocky Roads to Transfer: Rethinking Mechanisms of a Neglected Phenomenon," Educational Psychologist, 1989, 24 (2), pp. 113-142.

13. L. Poganowski, "Developing Skills in Critical Thinking and Problem Solving," Music Educators Journal, February, 1987.

14. R. Edwards, "Transfer and Performance Instruction," in C. Fowler, Ed., The Crane Symposium: Toward an Understanding of the Teaching and Learning of Music Performance, (Potsdam, NY: Potsdam College of the State University of New York, 1988).

15. Jerrold Ross and Ellyn Berk, "Arts Partners Research Study," National Arts Education Research Center, New York University, (New York, 1990).

16. Jerrold Ross and Ellyn Berk, National Arts Education Research Center, New York University, 1991.

17. "Utilitarian vs. Aesthetic Rationales for Arts Education," Music Educators Journal, Vol. 69, No. 7 (March 1983).

18. Gerard L. Kneiter, "Aesthetics for Arts' Sake," Music Educators Journal Vol. 69, No. 7 (March 1983), p. 35.

19. Geraldine Dimonstein, "The Place of Dance in General Education," Journal of Aesthetic Education, Winter, (1985).

20. Bennett Reimer, A Philosophy of Music Education, second edition (New Jersey: Prentice Hall, 1989).

21. Ibid., p. 10.

22. Kenneth H. Phillips, "Utilitarian vs. Aesthetic," Music Educators Journal, Vol. 69, No. 7, (March 1983), p. 30.

28. J. Goodlad, A Place Called School: Prospects for the Future, (New York, McGraw-Hill Book Company, 1984).

24. Mortimer Adler

25. Diane Ravitch, The Troubled Crusade: American Education 1945-1980, (New York: Basic Books, 19830.

26. Gardner, Howard, "Assessment in Context: The Alternative to Standardized Testing," in B.R. Gifford and M.C. O'Connor (Eds.), Changing Assessments: Alternative Views, Aptitudes, Achievement and Instruction. Kluwer Publishers, 1991.

27. Council on Economic Development, A Nation at Risk, 1983, p.5.

28. Committee on Secondary School Studies, 1983; Education Commission of the States Task Force on Education and Economic Growth, 1983; Ravitch, 1985.

Notes to Chapter 3:

1. The seven intelligences are described in an article by Howard Gardner and Thomas Hatch entitled "Multiple Intelligences Go to School," Educational Researcher, Nov. 1989, pp. 4-10.

   For example a person with bodily-kinaesthetic capacities would have abilities to control one's body movements and to handle objects skillfully. A person with musical capacities has abilities to produce and appreciate rhythm, pitch, and timbre and appreciate forms of musical expressiveness. Spatial capacity would enable a person to have abilities to perceive the visual-spatial world accurately, and to perform transformations on one's initial perceptions. Someone with interpersonal strengths would be able to discern and respond appropriately to the moods, temperaments, motivations and desires of other people. The person with intrapersonal capacity has access to one's own feelings and the ability to discriminate among them and draw upon them to guide behavior and knowledge of one's own strengths and weaknesses, desires and intelligences. A person with logical-mathematical capacities would have sensitivity to discern logical or numerical patterns and be able to handle long chains of reasoning. A linguistic capacity is sensitive to sounds, rhythms and meanings of words and to the different functions of language.

2. A child who excels in bodily/kinaesthetic intelligence can access history by performing dances from different time periods. A musically-capable student might study and understand cultural differences through a comparison of musical practice in various societies. Inter- and intrapersonal forms of thought can serve as the impetus for theatrical experiences that explore many aspects of human life and behavior. Also, the visual arts enable spatially capable students to explore many aspects of the basic curriculum by drawing, painting or constructing.

3. Account of a seventh grade student by Josephine Koebert, Principal of the Roosevelt Middle School of the Arts.

4. Eunice Boardman Meske, "Music in the Schools: A Rationale," Journal of Aesthetic Education, Winter, 1987; also David N. Aspin, "The Place of Music in the Curriculum: A Justification," in Journal of Aesthetic Education, 1982.

5. Judith Lynne Hanna, "Dance Education in Public Schools," Dance Teacher Now, March 1989 and "Ailey Camp Promotes Literacy for At-Risk Youth," in Dance Teacher Now, May 1990.

6. Ron Berger, "Building a Culture of High Standards," (unpublished, May, 1990).

7. Ibid.

29. Samuel R. Bachrach (ed), Education Reform: Making Sense of It All, (Boston: Allyn and Bacon, 1990).

30. Henry Levin, The Educationally Disadvantaged: A National Crisis, Philadelphia, Public/Private Ventures, 1985).

31. Ibid.

32. Sirotnik, Kenneth, "What you see is what you get: Consistency, persistency, and mediocrity in classrooms," Harvard Educational Review, 53:(1), p. 29.

33. Mortimer J. Adler, The Paideia Proposal. (New York: Macmillan, 1982).

34. Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession, A Nation Prepared: Teachers for the 21st Century, (New York: Carnegie Forum on Education and the Economy's Task Force on Teaching as a Profession, 1986).

35. Henderson, Anne T, Carl L. Marburger and Theodora Ooms, Beyond the Bake Sale: An Educator's Guide to Working with Parents, (Columbia, MD: National Committee for Citizens in Education, 1986).

36. Oakes, Jeannie, Keeping Track: How Schools Structure Inequality, (New Haven, CT: Yale University Press, 1985).

37. Rutter, R.A., Facilitating Teacher Engagement, (Madison, WI: National Center on Effective Secondary Schools, University of Wisconsin, 1987).

38. Sizer, Theodore, Horace's Compromise: The Dilemma of the American High School, (Boston: Houghton-Mifflin, 1984).

39. Erickson, F., "Transformation and school success: The policies and culture of educational achievement, Anthropology and Education Quarterly, 18: 335-356.

40. Powell, A.G., E. Farrar and D.K. Cohen, The Shopping Mall High School, (Boston: Houghton-Mifflin, 1985).

41. Adler, Ibid.

8. Heidi Hayes Jacobs, "The Growing Need for Interdisciplinary Curriculum Content," Interdisciplinary Curriculum: Design and Implementation. (Association for Supervision and Curriculum Development, 1989) p. 5.

9. A. Bloom, The Closing of the American Mind. (New York: Simon and Schuster, 1987).

10. A. Bloom, The Closing of the American Mind. (New York: Simon and Schuster, 1987).

11. Charles Fowler, "New Audiences for the 90s," Musical America Directory, 1990.

12. Diane Ravitch and Chester Finn, "The Humanities: A Truly Challenging Course of Study," The Great School Debate, edited by B. Gross and R. Gross, (Simon and Schuster, New York, 1985).

13. Heidi Hayes Jacobs, Op.Cit.

14. David Ackerman and D.N. Perkins, "Integrating Thinking and Learning Skills Across the Curriculum," Interdisciplinary Curriculum: Design and Implementation. (Association for Supervision and Curriculum Development, Alexandria, VA, 1989).

15. Ibid.

16. D.N. Perkins, "Selecting Fertile Themes for Integrated Learning," Interdisciplinary Curriculum: Design and Implementation, edited by Heidi Hayes Jacobs, (Association for Supervision and Curriculum Development, Alexandria, VA, 1989) pp. 67-66.

17. Statements quoted from Ashley River Creative Arts Elementary School's printed philosophy statement. Rose Maree Myers' Congressional testimony offered before the Interior Appropriations Subcommittee of the U.S. House of Representatives, April 19, 1991.

18. This description is adapted from the school brochure.

19. Ron Berger, Op.Cit.

20. Ibid.

21. Ibid.

22. Charles Fowler, "Selling the Arts in the 90s," Annual Conference of the Massachusetts Music Educators Association, March 22, 1991.

23. Even in the experience of this fourth grade cohort, Ashley River students tested at the same level in reading, language and science and fell below district and state levels only in mathematics. It is interesting to note that similar results were not

observed among 5th graders in the following year when Ashley River fifth graders again exceeded county and state averages by 6 to 19 percentile points.

24. Virtually identical patterns of student achievement are found in the fourth and fifth grade performance on the Stanford-8 achievement test in which 62 to 72% of 4th and 5th graders are at or above the 50th national percentile in mathematics, reading, language, and science. Comparable results for the county indicate that with the exception of 4th grade mathematics, fewer than half of 4th and 5th graders scored at or above the national norm. The same pattern is observed among 4th and 5th graders throughout South Carolina. In summary, 15 to 20% more Ashley River students are above national norms than students throughout the rest of Charleston or South Carolina.

Some Key Study Findings

1. The arts can foster the development of students who are actively engaged in learning.

- *The arts afford varied modes of learning, creating greater opportunities for students and teachers to connect in productive ways.*

  At the Karl Kellogg Elementary School in Chula Vista, CA, a dynamic performing arts program "breathes life into history" as each year the school selects a different civilization as a counterpoint to studying U.S. culture and history. Every student is involved through a range of artistic activities -- acting, dancing, singing, constructing, performing, writing and researching. More students learn the concepts because "the students think, feel, see and *are* history.

- *The arts afford opportunities for intimate and varied connections between students and teachers.*

  The arts enable students to experience teachers -- and teachers to experience students -- as full individuals with many-faceted interests and abilities. In producing "Peter Pan" at the Kellogg Elementary School, students experienced their teacher's frustration -- and his exhilaration -- as he perfected his lines in the role of Captain Hook. And they demonstrated the group's rapport as they giggled with naughty delight at the chance to call him "the slimiest slime of them all."

2. The arts contribute to the development of a creative, committed and exciting school culture of teachers, students and parents.

- *The arts can contribute to creating a culture of excellent teachers.*

  A biology teacher at the F.A.C.E. program in Montreal cited the example of students who presented reports on molecular structure through dances and plays. This method required the science teacher to re-think his own presentation of the material and his method of assessing these students. This was a new challenge for him, but he was pleased with a new way to help students grasp such abstract concepts.

- *The arts afford broad ownership of the school building and program by students, teachers and parents.*

  An arts-oriented school often changes the way students view their school building. At the Eliot, Elm, Ashley River, and Roosevelt schools as much of the hallway is given to display areas as to walking space. With their artwork on display, students find it easy to direct the attention of a teacher, a

parent, or a visitor to their own patch of the wall, or to pick up their sculptures to animate the display. One of the results of this ownership is that none of these hallways is marked by graffiti, nor are the exhibits vandalized.

3. The arts play a role in generating a dynamic, coordinated and cohesive curriculum.

- *The arts can be used to teach thematic curriculum.*

  Every student at Ashley River receives a weekly minimum of 80 minutes each of fine art, music, physical education (including dance), drama/creative writing, and Spanish (less than 80 minutes for younger children); interested students can also participate in ballet and Suzuki violin. In addition to these class times, teachers are encouraged to "[use] art processes as naturally as books, chalkboards, and lectures." Science, writing, reading, social studies, math, and the arts are combined in such interdisciplinary units as "Weather, Wonderful Weather!" As the unit is taught, the students progress toward mandated curricular goals in each of these subject areas, including the arts. The arts are taught not only as a discipline, but help to bring the other disciplines together in an integrated and cohesive whole.

- *The arts can create a locus for expressing and exploring interdisciplinary themes.*

  Some schools had an arts coordinator who created the "center," or place to carry out the thematic curriculum. At its least developed, the center was the arts coordinator's office. At its most energized, it was the theater or the gallery and truly operated as the hub of the school.

  At the Elm School the Gallery is used as exhibit space for display of current theme. For the Roosevelt School, the Gallery serves a similar function, and is a meeting place for students, teachers and parents who use it as a resource and research center to explore the theme.

4. The arts can build bridges to the larger community, the broader culture and other institutions.

- *An arts focused school can build bridges to local institutions.*

  The Elm Creative Arts School has a unique relationship with the Milwaukee Art Museum's Junior Docent Program. After approximately three visits to the Art Museum with their art teacher, each child of the fifth grade class chose one piece of art, and studied the work and its artist. The student sketched the piece, wrote about the artist and/or the piece of work, and prepared a short speech describing it. The project culminated in the production of a booklet about the art and a presentation for parents and students entitled, "Art Center Night" at the Milwaukee Art Museum.

- *The arts afford greater and varied opportunity for parents and family members to be involved in their child's education.*

  One teacher reported "a parent who, despite many coaxings, had never come to school for parent-teacher interviews, showed up at school for the first time when her son had a role in the chorus in the school musical."

5. The arts can humanize the learning environment.

- *History comes alive and faraway places and cultures come closer to home.*

  The students at the Ashley River School made the pottery of local native American ethnic groups as they studied the history of South Carolina. Mixing clay with cow dung and firing their pieces in a pit, they studied firsthand the technology, materials and history of these groups. Recreating the designs and colors of the pottery, they understood the aesthetic and cultural symbolism that helped shape their local culture.

- *Multi-cultural aspects of the arts foster appreciation and acceptance of diversity.*

  Each fourth grade student in the Eliot School chose an historical woman for Women's History Month and a prominent black American for Black History Month. They created costumes, murals, and drawings to represent their chosen figures, and each student gave a presentation as if he or she were that important figure. Some time after these events and classroom units, individual students jumped at the chance to tell their figures' stories of achievement and oppression, and many students in the class could remember characters their classmates portrayed. For the class, Amelia Earhart was no longer a distant figure, but the person Joanne brought to life.

6. The arts contribute to improved academic performance.

Patterns of achievement among Ashley River students have remained high throughout the school's history. More than 90% of students in grades 1 through 3 have met basic skills assessment standards in reading math throughout the period; and in recent years, the percentage of students meeting basic skills standards has regularly exceeded 96%. These rates of achievement are about 10 percentage points higher than students enrolled in other Charleston County schools and in the state. Although the school enrolls a somewhat better academically prepared student population, the school appears to sustain and build effectively on its students' academic potential.

Elm Elementary provides some initial evidence about how an urban school serves its students using an arts-infused curriculum. Student performance as measured by standardized tests suggests that students master

basic skills at a rate consistently higher and faster than do their peers in other schools. This rate of mastery apparently continues from the primary grades through later elementary years.

Students in Kellogg Elementary School are not necessarily drawn from the most academically advantaged, yet in virtually all grades, the school has shown strong progress toward achieving and ultimately surpassing national norms in basic reading, writing and mathematics skills. While considerable room for improvement remains, Kellogg Elementary appears to provide a strong academic foundation for its students as well as an exciting performing arts program. Its impressive progress in the past several years suggests its overall program is beneficial to its students.